

# the JOURNAL

of the MICHIGAN STATE MEDICAL SOCIETY

Volume 46

FEBRUARY, 1947

HOSPITAL LIBRARY

Number 2



—Reproduced courtesy Lincoln National Life Insurance Company

Lincoln as a Youth

SYMBOLS OF SIGNIFICANCE

# MAPHARSEN



## Table of Contents

Treatment of H. Influenzae Meningitis. <i>H. E. Alexander, M.D.</i> .....	193	Woman's Auxiliary.....	224
Results from the Treatment of Peptic Ulcer. <i>T. Grier Miller, M.D.</i> .....	198	In Memoriam.....	228
Acute Glomerulonephritis. <i>Francis D. Murphy, M.D.</i> .....	204	What's What.....	232
Dermatitis Medicamentosa. <i>Francis Eugene Senear, M.D.</i> .....	208	The Doctor's Library.....	252
Psychosomatic Study of a Case of Gynecomastia. <i>Leonard B. Shpiner, Major, MC, AUS.</i> .....	211		
Coloboma of Optic Nerve. <i>Harold H. Harms, M.D., and Frank L. Ryerson, M.D., F.A.C.S.</i> .....	214	What the Hospital Survey and Construction Act Means to the Hospitals of Michigan. <i>Ralph M. Hueston</i> .....	158
Editorial:		Michigan Postgraduate Clinical Conference—Program .....	166
Mental Hygiene for Children.....	216	Contributions and Pledges to Michigan Foundation for Medical and Health Education.....	168
Medical Propaganda.....	216	Michigan Hospital Service—Veterans Program.....	170
How To Select a Family Physician.....	217	Postgraduate Continuation Courses, Wayne University College of Medicine.....	174
Special Committee on Infectious Diarrhea.....	218	"Socialized Medicine—Bad Medicine for You".....	176
Proceedings Detroit Physiological Society.....	219	You and Your Business.....	178
Michigan's Department of Health.....	220	Communication .....	180

Copyright, 1947, by Michigan State Medical Society

Fitting  
Hours:  
9:30 to 5:30

### HACK'S FOOT NOTES

*Shoe Information for the Profession*

Telephone:  
Randolph  
7790

Fifth Floor  
Stroh Building

Published by the Hack Shoe Co.

Twenty-eight  
Adams Ave. W.

Our 31st Year

Detroit 26, Michigan, February, 1947

Established 1916

#### CONTROLLED CORRECTION

is provided by the three counter-balancing, yet paradoxically, complementary flanges found in HACK'S TRI-BALANCE SHOES.

The medial flange is balanced by two lateral flanges which control the side-slip and prevent overcorrection.

The anteriorward of these tends to prevent forefoot splay and metatarsal spread; the posteriorward tends to prevent calcaneal rotation.



# THE JOURNAL

## of the Michigan State Medical Society

VOLUME 46

FEBRUARY, 1947

NUMBER 2

### PUBLICATION COMMITTEE

FRED H. DRUMMOND, M.D., *Chairman*.....Kawkawlin  
OTTO O. BECK, M.D.....Birmingham  
OSCAR D. STRYKER, M.D.....Fremont  
DEAN W. MYERS, M.D.....Ann Arbor  
WILFRID HAUGHEY, M.D.....Battle Creek

Office of Publication  
2642 University Avenue  
Saint Paul 4, Minnesota

### Editor

WILFRID HAUGHEY, M.D.  
610 Post Bldg., Battle Creek, Michigan

### Secretary and Business Manager of THE JOURNAL

L. FERNALD FOSTER, M.D.  
Thorne Bldg., 919 Washington Ave.  
Bay City, Michigan

### Executive Secretary

WM. J. BURNS, LL.B.  
2020 Olds Tower, Lansing 8, Michigan

All communications relative to exchanges, books for review, manuscripts, should be addressed to Wilfrid Haughey, M.D., 610 Post Bldg., Battle Creek, Michigan.

All communications regarding advertising and subscriptions should be addressed to Wm. J. Burns, 2642 University Avenue, Saint Paul 4, Minnesota, or 2020 Olds Tower, Lansing 8, Michigan. Telephone 57125.

Copyright, 1947, by Michigan State Medical Society

Published monthly by the Michigan State Medical Society as its official journal at 2642 University Avenue, Saint Paul 4, Minnesota.

Entered at the post office at Saint Paul, Minnesota, as second class matter, May 7, 1930, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 7, 1918.

Yearly subscription rate, \$5.00; single copies, 50 cents.

PRINTED IN U.S.A.

### OFFICERS OF THE SOCIETY

1946-47

President.....WM. A. HYLAND, M.D.....Grand Rapids  
President-Elect.....P. L. LEDWIDGE, M.D.....Detroit  
Secretary.....L. FERNALD FOSTER, M.D.....Bay City  
Treasurer.....A. S. BRUNK, M.D.....Detroit  
Speaker.....J. S. DeTAR, M.D.....Milan  
Vice Speaker.....R. H. BAKER, M.D.....Pontiac

### THE COUNCIL

E. F. SLADEK, M.D., *Chairman*, Traverse City  
OTTO O. BECK, M.D., *Vice Chairman*, Birmingham  
L. FERNALD FOSTER, M.D., *Secretary*, Bay City

	District	Term Expires
C. E. UMPHREY, M.D.	1st.....Detroit	1951
P. A. RILEY, M.D.	2nd.....Jackson	1950
WILFRID HAUGHEY, M.D.	3rd.....Battle Creek	1950
R. J. HUBBELL, M.D.	4th.....Kalamazoo	1951
J. D. MILLER, M.D.	5th.....Grand Rapids	1951
R. C. POCHERT, M.D.	6th.....Owosso	1951
T. E. DeGURSE, M.D.	7th.....Marine City	1947
W. E. BARSTOW, M.D.	8th.....St. Louis	1947
E. F. SLADEK, M.D.	9th.....Traverse City	1947
F. H. DRUMMOND, M.D.	10th.....Kawkawlin	1947
O. D. STRYKER, M.D.	11th.....Fremont	1948
A. H. MILLER, M.D.	12th.....Gladstone	1948
W. H. HURON, M.D.	13th.....Iron Mountain	1948
D. W. MYERS, M.D.	14th.....Ann Arbor	1949
O. O. BECK, M.D.	15th.....Birmingham	1950
E. R. WITWER, M.D.	16th.....Detroit	1950
J. S. DeTAR, M.D.	Speaker	Milan
W. A. HYLAND, M.D.	President	Grand Rapids
P. L. LEDWIDGE, M.D.	President-Elect	Detroit
L. FERNALD FOSTER, M.D.	Secretary	Bay City
A. S. BRUNK, M.D.	Treasurer	Detroit

### EXECUTIVE COMMITTEE OF THE COUNCIL

E. F. SLADEK, M.D.....Chairman  
O. O. BECK, M.D.....Vice Chairman  
F. H. DRUMMOND, M.D.....Chairman, Publication Committee  
E. R. WITWER, M.D.....Chairman, Finance Committee  
J. D. MILLER, M.D.....Chairman, County Societies Committee  
J. S. DeTAR, M.D.....Speaker, House of Delegates  
W. A. HYLAND, M.D.....President  
P. L. LEDWIDGE, M.D.....President-Elect  
L. FERNALD FOSTER, M.D.....Secretary

### SECTION OFFICERS

#### Medicine

Franklin W. Baske, M.D., *Chairman*.....Flint  
G. Thomas McKean, M.D., *Secretary*.....Detroit

#### Surgery

J. C. Foshee, M.D., *Chairman*.....Grand Rapids  
Edward Dowdle, M.D., *Secretary*.....Detroit

#### Gynecology and Obstetrics

Robert B. Kennedy, M.D., *Chairman*.....Detroit  
Harold H. Lampman, M.D., *Secretary*.....Detroit

#### Delegates

L. G. Christain, M.D., Lansing.....1947  
F. E. Reeder, M.D., Flint.....1947  
W. D. Barrett, M.D., Detroit.....1948  
T. K. Gruber, M.D., Eloise.....1948  
C. R. Keyport, M.D., Grayling.....1948

#### Dermatology and Syphilology

Loren W. Shaffer, M.D., *Chairman*.....Detroit  
Ruth Herrick, M.D., *Secretary*.....Grand Rapids

#### Radiology, Pathology, Anesthesia

S. E. Gould, M.D., *Chairman (Path.)*.....Eloise  
James E. Loftstrom, M.D., *Secretary (Rad.)*.....Detroit  
H. J. Van Belois, M.D., *Secretary (Anes)*.....Grand Rapids

#### General Practice

E. C. Texter, M.D., *Chairman*.....Detroit  
E. M. Pettis, M.D., *Secretary*.....Muskegon

### DELEGATES TO A. M. A.



#### Pediatrics

Mark F. Osterlin, M.D., *Chairman*.....Traverse City  
J. Hugh Lewis, M.D., *Secretary*.....Wyandotte

#### Ophthalmology and Otolaryngology

James Maxwell, M.D., *Chairman (Otol.)*.....Ann Arbor  
Ralph Gilbert, M.D., *Co-Chairman (Ophthal.)*.....Grand Rapids  
J. Lewis Dill, M.D., *Secretary (Otol.)*.....Detroit  
Walter Rundles, M.D., *Co-Secretary (Ophthal.)*.....Flint

#### Urology


R. K. Ratliff, M.D., *Chairman*.....Ann Arbor  
H. L. Miller, M.D., *Secretary*.....Detroit

#### Alternates

H. H. Cummings, M.D., Ann Arbor.....1947  
R. H. Pino, M.D., Detroit.....1947  
R. L. Novy, M.D., Detroit.....1948  
R. H. Denham, M.D., Grand Rapids.....1948  
C. I. Owen, M.D., Detroit.....1948



*a photogenic  
contrast medium*



PRIODAX, a superior contrast medium for oral cholecystography, is photogenic — taking a “good picture” consistently. Because it is rarely lost by vomiting or diarrhea from the gastrointestinal tract, a maximum is concentrated in the gallbladder to produce a clear, sharp shadow. “Retakes” are therefore reduced to a minimum, while little or no residual contrast substance appears in the colon to obscure accurate diagnosis.

**PRIODAX**

(brand of iodoalphonic acid)



PRIODAX, beta-(4-hydroxy-3, 5-diiodophenyl)-alpha-phenyl-propionic acid, is available in 0.5 Gm. tablets in economy boxes of 100 envelopes and in boxes of 1, 5 and 25 envelopes. Each envelope contains 6 easily swallowed tablets constituting the usual dose. Directions for the patient are enclosed with each package.

Trade-Mark PRIODAX—Reg. U. S. Pat. Off.



*Schering* CORPORATION • BLOOMFIELD, N. J.  
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

# *What the Hospital Survey and Construction Act Means to the Hospitals of Michigan*

By Ralph M. Hueston  
Superintendent, Hurley Hospital  
Flint, Michigan

THE ORIGINAL HOSPITAL survey committee appointed by the Board of Trustees of the Michigan Hospital Association evolved into the Michigan Hospital Survey Committee appointed by the State governor. The membership of this committee included representatives of hospitals, the medical profession, the nursing profession, the general public, and several special groups. The committee held its first meeting December 15, 1944. At this meeting an Executive Committee was elected. The Executive Committee was instructed to prepare a survey report. The survey on which the report was based was conducted by the Study Committee of the National Committee on Hospital Care. Dr. A. C. Bachmeyer was director of the Study Committee.

The survey report was submitted to and approved by the Michigan Hospital Survey Committee at a meeting held September 5, 1946. The data and recommendations contained in this report covered approximately 250 pages. A condensed report covering only thirteen pages has been prepared for the convenience of those who are not especially interested in the exhaustive detail contained in the complete report. A copy of the complete report may be obtained upon request.

Never has there been a time when there was so much demand for hospital service as there is at the present time, and never was there a time when there was so much planning for expanding hospital facilities and services as there is at the present time. As a result of these two conditions, there never was a time when there was a greater need for the providers of hospital service to co-ordinate their efforts in order to assure the consumers of hospital service a maximum of benefits.

The hospitals of Michigan have taken three important steps forward during recent years, which will help them meet today's challenge. In 1939 they joined with the hospitals in Indiana, Illinois, and Wisconsin, as members of the Tri-State Hos-

pital Assembly. In 1940 they appointed a hospital survey committee to study the hospital facilities available in Michigan. In 1946 they reorganized the Michigan Hospital Association as a full-time endeavor. The results of these three actions have provided the hospitals in Michigan with more opportunities for improving their present services and for planning their future services than are available to hospitals any place else in the United States.

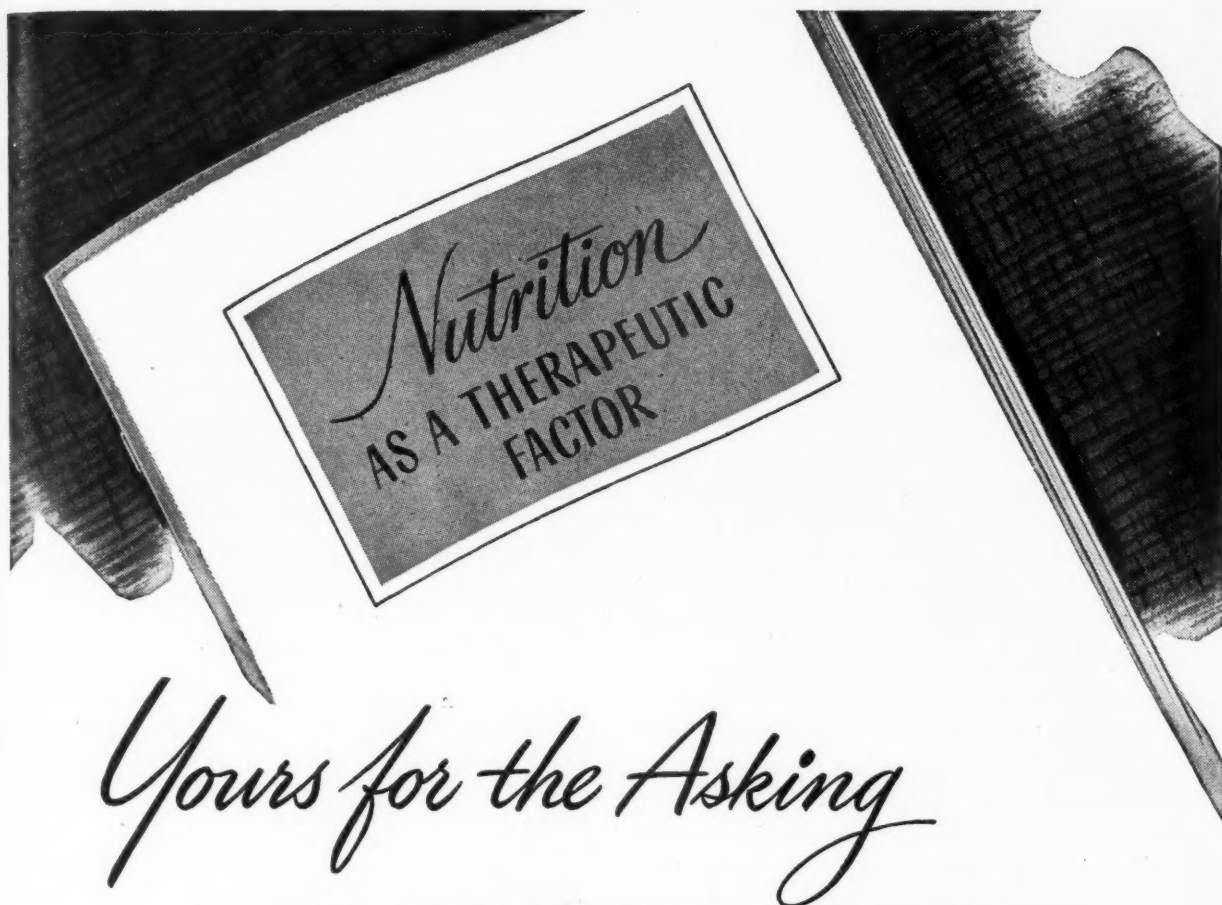
From the survey report, hospitals know what facilities and services are now available and what should be included in plans for changing or expanding these facilities and services. Any program for changing or expanding facilities includes the problems of financing. For most hospitals, financing capital improvements presents a major problem. Fortunately the Federal Government has recognized that hospitals need aid in helping to finance such programs. This was part of the reason for introducing Senate Bill 191, which has become Public Act No. 725 under the title, "Hospital Survey and Construction Act." This act is divided into three sections: (1) Surveys and Planning, (2) Construction of Hospitals and Related Facilities, and (3) Policy Governing the Administration of the Act.

The section on "Surveys and Planning" provides an authorization of three million dollars to be used for making payments to states for surveys. While it is true that the general survey for Michigan has been completed, there is still a great deal of survey work and planning to be done. For instance, it is necessary to do some more work in the Detroit area. Also, it is necessary to develop more detailed plans so far as nervous and mental hospitals, tuberculosis sanitaria and chronic disease hospitals are concerned.

The section on "Construction of Hospitals and Related Facilities" is of most importance to Michigan Hospitals. The major provisions of this section may be divided under three general headings:

*(Continued on Page 160)*

Presented at Conference arranged by Michigan Hospital Association, January 17, 1947, at Detroit.



**THIS INFORMATIVE COMPENDIUM  
ON A TIMELY SUBJECT**

**P**HYSICIANS are invited to use the appended coupon to request a complimentary copy of the new brochure "Nutrition As A Therapeutic Factor." In a terse, straightforward manner, this compendium of current thought presents the remarkable strides made during the last decade in the use of nutritional factors as therapeutic weapons. The pres-

entation concisely outlines present aspects of nutritional therapy providing information and data valuable in everyday practice. The applicability of the various nutrients in the treatment of disease is presented, adding to the practical utility of the brochure. The Wander Company, 360 North Michigan Ave., Chicago 1, Illinois.

**THE WANDER COMPANY, 360 N. MICHIGAN AVENUE, CHICAGO 1, ILLINOIS**

Gentlemen: You may send me a complimentary copy of "Nutrition As A Therapeutic Factor."

\_\_\_\_\_. M.D.

Address \_\_\_\_\_

City and State \_\_\_\_\_



## HOSPITAL SURVEY AND CONSTRUCTION ACT

(Continued from Page 158)

(1) appropriations, (2) general regulation, and (3) state plans.

The Act provides authorization in the amount of seventy-five million dollars a year for five years, beginning with the fiscal year July, 1946, to July, 1947. Unfortunately, the Act was passed after the budget for this fiscal year was approved, with the result that no funds are provided in the budget to pay the authorization intended for this year. To compensate for such a condition and also to provide further for the maximum use of the appropriation, the Act provides that any portion of the appropriation unused in one fiscal year may be used during the succeeding fiscal year. If Congress appropriates the full amount authorized by the law, there will be 150 million dollars available for the fiscal year July, 1947, to July, 1948. The money appropriated is to be used for making payments to states and political subdivisions thereof, and public or other nonprofit agencies in the state which have submitted construction plans approved by the Surgeon General. The plan for allocating Michigan's share of the appropriation has not been determined. However, after the Federal Hospital Council had approved the rules and regulations on November 15, Dr. Wilson and Mr. Davis attempted to set up priorities for Michigan on a basis of what they knew about the situation. There are three areas in Michigan where there are no hospital facilities. These areas undoubtedly will be given highest priority, because of Section 622-D of the Act which specifies that special consideration to hospitals serving rural communities and areas with relatively small resources is required. There are fourteen other comparatively rural areas where the present hospitals are old houses or similarly inadequate structures. No doubt these will come next, so far as priorities are concerned. Then there are quite a number of hospitals classified as community hospital centers where the plants need modernization and enlargement. These probably will be next in line for consideration.

The maximum subsidy available for any single project is  $33\frac{1}{3}$  per cent of its cost. Michigan's share of the appropriation will be that portion which is equal to the per capita income of Michigan in relation to the per capita income of the United States. Reduced to dollars, this means that Michigan's share will be approximately two million dollars a year or a total of approximately ten mil-

lion dollars for the five-year program. If the total cost of the approved projects in this period does not exceed thirty million dollars, each approved project will receive a subsidy equal to  $33\frac{1}{3}$  per cent of its cost.

The "General Regulation" provides that, within six months after the enactment of the Hospital Survey and Construction Act, the Surgeon General, with the approval of the Federal Hospital Council and the administrators, is to prescribe:

1. The number of general hospital beds required to provide adequate hospital services to people residing in a state, and the general distribution of such beds. The total number of beds for any state is not to exceed four and one-half per 1,000 population except that in states having less than twelve and more than six persons per square mile the limit is to be five beds per 1,000. In states having six persons or less per square mile the limit will be five and one-half beds per 1,000.

2. The number of beds required to provide adequate hospital services for tuberculous, mental, and chronic-disease patients in a state and the general method of distribution. The number of beds for tuberculous patients is not to exceed two and one-half times the average annual deaths from tuberculosis over the period from 1940 to 1944. The total number of beds for mental patients is not to exceed five per 1,000 population, and for chronic-disease patients is not to exceed two per 1,000.

3. The number of public health centers is not to exceed one per 30,000 population, except that in states having less than twelve persons per square mile, it is not to exceed one per 20,000.

4. The general standards of construction and equipment for hospitals of different classes and in different types of locations.

Any state wishing to avail itself of Federal funds under the Hospital Survey and Construction Act must comply with the following:

1. Designate a single state agency which will have authority to carry out building plans.

2. Designate a state advisory council which is to include representatives of non-government organizations or groups, and of state agencies concerned with the operation, construction, or utilization of hospitals, and representatives of consumers of hospital services.

3. Set forth a hospital construction program meeting this law and rules and regulation of the Surgeon General and the Federal Hospital Council.

4. Provide for methods of administration of the state plans including methods relating to the establishment of personnel standards on a merit basis.

5. Provide minimum standards, to be fixed in the discretion of the state, for the maintenance and opera-

(Continued on Page 162)

# IT IS GOOD PRACTICE

...in judging the irritant properties of cigarette smoke... to base your evaluation on scientific research.

In judging *research*, you must consider its source\*.

PHILIP MORRIS claims of superiority are based *not* on anonymous studies, but on research conducted only by competent and reliable authorities, research reported in leading journals in the medical field.

Clinical as well as laboratory tests have shown PHILIP MORRIS to be definitely and measurably less irritating to the sensitive tissues of the nose and throat.

May we send you reprints of the studies?



## PHILIP MORRIS

PHILIP MORRIS & CO., LTD., INC.,  
119 FIFTH AVENUE, N. Y.

\**Laryngoscope*, Feb. 1935, Vol. XLV, No. 2, 149-154  
*Laryngoscope*, Jan. 1937, Vol. XLVII, No. 1, 58-60

*Proc. Soc. Exp. Biol. and Med.*, 1934, 32, 241  
*N. Y. State Journ. Med.*, Vol. 35, 6-1-35, No. 11, 590-592.

TO THE PHYSICIAN WHO SMOKES A PIPE: We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

## HOSPITAL SURVEY AND CONSTRUCTION ACT

(Continued from Page 160)

tion of hospitals which receive Federal aid under this law.

6. Provide for opportunity for hearings.

7. Provide for reports to the Surgeon General as he may require.

If the Surgeon General disapproves any state plan, the state agency may apply to the Federal Hospital Council for a hearing.

If any state has not enacted legislation prior to July 1, 1948, providing that compliance with minimum standards of maintenance and operation shall be required in the case of hospitals which are to receive Federal aid under this law, such states will not be entitled to further allotments.

Up to the present time, Michigan has not enacted legislation to meet this provision of the Hospital Survey and Construction Act. Therefore, it is imperative that the necessary legislation is enacted at this session of the legislature if the hospitals and residents of Michigan are to benefit under the Hospital Survey and Construction Act. Each of you is urged to use your influence to help get such legislation enacted.

The "Administration of the Act" has been delegated to the Surgeon General and the Federal Hospital Council under the following program:

1. The Surgeon General is authorized to make the administrative regulations and perform the functions he finds necessary to carry out the provisions of this law.

2. These regulations are to be approved by the Administrator of the Federal Security Agency.

3. The Surgeon General must consult with a Federal Hospital Council consisting of the Surgeon General, chairman ex officio, and eight members appointed by the Administrator. Four of the eight members must be persons outstanding in the fields of hospital and health activities, three of whom must be authorities in the operation of hospitals. The other four members must be persons familiar with the need for hospital services in urban or rural areas. Each member holds office for four years. The Council may appoint advisory and technical committees deemed necessary to carry out its functions.

Our most important responsibility right now is to see that the necessary legislation is passed to qualify the hospitals in Michigan for benefits under the Hospital Survey and Construction Act. Four million dollars in subsidies is at stake for this next fiscal year, and six million more during the succeeding three years. We who are the providers of hospital service owe it to those who are the consumers of this service to do whatever is within

reason to meet today's demand for hospital service. Ten million dollars in subsidies is available to Michigan to finance the building and equipping of additional facilities to help meet today's demand for hospital service.

### CARE OF THE HEART

The following release is endorsed by the Rheumatic Fever Control Committee:

During the past third of a century, the improvement in mortality from heart disease was most pronounced in the younger age groups and decreased progressively with advance in age. The death rate from diseases of the heart and arteries, corrected for the aging of the population, dropped virtually 30 per cent between 1911-15 and 1940-44, according to experience among the Industrial policyholders of the Metropolitan Life Insurance Company. This reduction in mortality from the principal cardiovascular-renal diseases has been particularly marked among white females—37 per cent in the above-mentioned period. Among the males, the decrease in mortality, while not as marked as among the females, was 25 per cent, still a quite substantial reduction. This still leaves much to be desired in the field of early diagnosis and immediate initiation of adequate cardiac regimes in order to reduce to a minimum incapacity and mortality from these conditions. Concentration of effort must now be placed on teaching the public what is known about prevention, early recognition, and care of cardiac lesions.

In order to assist in the attainment of this goal, the Metropolitan Life Insurance Company is conducting a special campaign on heart disease during the fall and winter months. At that time, the Company's more than 20,000 Field Representatives, in co-operation with official and voluntary agencies, will reach the homes of millions of policyholders with a recently published pamphlet, *Your Heart*, developed in co-operation with the American Heart Association. A lay educational film on heart disease is also being prepared. Distribution will be made to physicians of a packet in which will be included material of special interest to doctors, and a scientific exhibit on heart disease, first shown at the AMA meeting in San Francisco, is available for State and local professional meetings.

The public is becoming more acutely aware of cardiac hygiene than ever before—a growing interest that should be cultivated and guided with judgment as well as vigor.

### FULBRIGHT-TAFT BILL

The Fulbright-Taft Bill (S-140) is up for hearings before the Senate Committee on Labor and Public Welfare. This bill is vicious because it will place health service subordinate to a layman cabinet member probably representing social service. Letters of protest to senators and your representative will help.

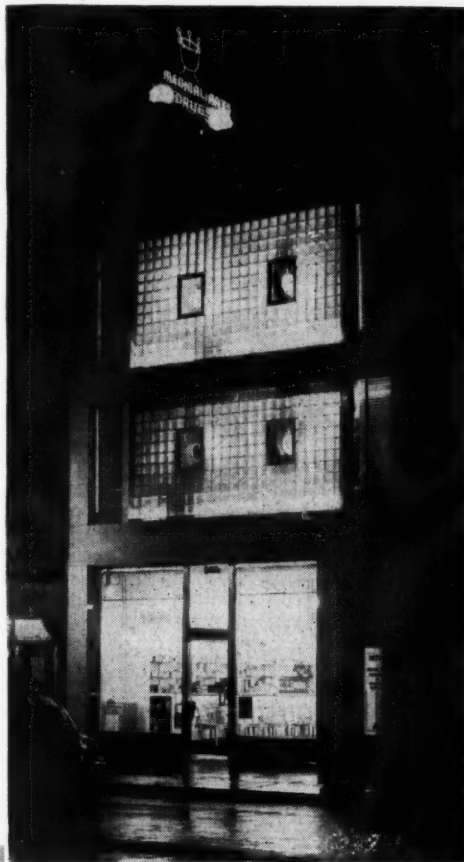


# *The Most Modern Prescription Pharmacy in Michigan*

## THREE FLOORS OF PRESCRIPTION NEEDS AND PHYSICIAN'S SUPPLIES

Medical Arts Pharmacy represents the achievement, through the physician's co-operation, of one of the finest and most modern of professional prescription pharmacies in Michigan. Established in 1936 it has had a phenomenal growth through strict adherence to the highest of ethics. "*Nothing Sold Without a Doctor's Prescription*" has been the policy since the inception of Medical Arts Pharmacy and it continues to be rigidly maintained to this day.

HOURS  
8 A. M. to 12 Midnite  
*Motorized Delivery Service*



PRESCRIPTIONS

PHYSICIAN AND  
HOSPITAL SUPPLIES



## DETROIT MEDICAL ARTS PHARMACY

Your Supplier of All New Drugs From All Over the World  
*Four Main Lines for Your Convenience*

TOwnsend 8-3149-50-51-52

13714 WOODWARD AVENUE

DETROIT 3, MICHIGAN

FEBRUARY, 1947

*Say you saw it in the Journal of the Michigan State Medical Society*

165

# Michigan Postgraduate Clinical Conference

## First Annual Session

Book-Cadillac Hotel, Detroit, Wednesday-Thursday-Friday, March 12-13-14, 1947.

This conference will be presented under the sponsorship of the Michigan State Medical Society in co-operation with the Wayne County Medical Society, the University of Michigan Medical School, Wayne University College of Medicine, University of Michigan Department of Postgraduate Medicine, and the Michigan Foundation for Medical and Health Education.

### WEDNESDAY, MARCH 12, 1947

8:30 AM Registration—Exhibits Open—Italian Garden, Fourth Floor, Book-Cadillac Hotel

#### First Assembly Grand Ballroom

L. Fernald Foster, M.D., Bay City, *Chairman*

- 8:55 AM Welcome.....William A. Hyland, M.D., Grand Rapids, President MSMS  
W. B. Harm, M.D., Detroit, President, Wayne County Medical Society  
9:00- 9:20 "Gynecological and Obstetrical Problems in Industrial Medicine and Surgery".....Max Burnell, M.D., Flint  
9:20- 9:40 "Varicose Veins".....E. A. Osius, M.D., Detroit  
9:40-10:00 "Fluid Balance in Children".....P. V. Woolley, M.D., Detroit  
10:00-11:00 Intermission to View Exhibits  
11:00-11:20 "The Evaluation of the Lowered Metabolic Rate".....R. M. McKean, M.D., Detroit  
11:20-11:40 "Treatment of Common Fractures".....H. H. Stryker, M.D., Kalamazoo  
11:40-12:00 "Anti-Histamine Compounds".....S. W. Insley, M.D., Detroit

12:15- 1:15 PM LUNCHEON, English Room

E. D. Spalding, M.D., Detroit, *Chairman*

1:15- 1:45 "Newer Methods in the Treatment of Anemias".....C. C. Sturgis, M.D., Ann Arbor

#### Second Assembly Grand Ballroom

E. I. Carr, M.D., Lansing, *Chairman*

- 2:00- 2:20 PM "Tumors of the Breast".....R. D. McClure, M.D., Detroit  
2:20- 2:40 "Atypical Pneumonia".....B. M. Bullington, M.D., Saginaw  
2:40- 3:00 "The Nasopharynx in a Streptococcus Epidemic".....O. B. McGillicuddy, M.D., Lansing  
3:00- 4:00 Intermission to View Exhibits  
4:00- 4:20 "Evaluation of the Serological Tests for Syphilis".....A. C. Curtis, M.D., Ann Arbor  
4:20- 5:00 CLINICAL-PATHOLOGICAL CONFERENCE—A Medical Diagnostic Problem. Conducted by Plinn F. Morse, M.D., Detroit.

#### Third Assembly Grand Ballroom

Grover C. Penberthy, M.D., Detroit, *Chairman*

8:00 PM Symposium on "Protection Against Infectious Disease"

J. A. Johnston, M.D., Detroit  
Thomas Francis, Jr., M.D., Ann Arbor  
Hardy A. Kemp, M.D., Detroit

10:00 SMOKER. Entertainment sponsored by Wayne County Medical Society.

### THURSDAY, MARCH 13, 1947

8:30 AM Registration—Exhibits Open—Italian Garden, Fourth Floor, Book-Cadillac Hotel

#### Fourth Assembly Grand Ballroom

H. R. Prentice, M.D., Kalamazoo, *Chairman*

- 9:00- 9:20 AM "The Minimal Tuberculosis Infection".....J. W. Towey, M.D., Powers  
9:20- 9:40 "Treatment of Burns".....C. N. Weller, M.D., Detroit  
9:40-10:00 "Sterility in the Female".....N. F. Miller, M.D., Ann Arbor

- |                |   |                                  |
|----------------|---|----------------------------------|
| 10:00-11:00    | Intermission to View Exhibits                       |                                  |
| 11:00-11:20    | "Choice of Anesthesia in General Practice".....     | Joe DePree, M.D., Grand Rapids   |
| 11:20-11:40    | "Intestinal Obstruction".....                       | C. G. Johnston, M.D., Detroit    |
| 11:40-12:00    | "The Clinical Diagnosis of Cardiac Arrhythmias"     |                                  |
|                |   | C. B. Beeman, M.D., Grand Rapids |
| 12:15- 1:15 PM | LUNCHEON, English Room                              |                                  |
|                | B. B. Bushong, M.D., Traverse City, <i>Chairman</i> |                                  |
| 1:15- 1:45     | "Pain of Spinal Origin".....                        | C. E. Badgley, M.D., Ann Arbor   |

## Grand Ballroom

**Frank A. Weiser, M.D., Detroit, *Chairman***

- 2:00- 2:20 PM "The Application of Psychiatry to Medical Practice" J. M. Dorsey, M.D., Detroit  
2:20- 2:40 "Respiratory Infections in Infants".....M. Cooperstock, M.D., Marquette  
2:40- 3:00 "Abdominal Surgery in Infancy and Childhood"....C. D. Benson, M.D., Detroit  
3:00- 4:00 Intermission to View Exhibits  
4:00- 4:20 "Ocular Emergencies in General Practice".....F. B. Fralick, M.D., Ann Arbor  
4:20- 5:00 CLINICAL-PATHOLOGICAL CONFERENCE—A Surgical Case.  
Conducted by G. V. Weller, M.D., Ann Arbor

## Grand Ballroom

- 8:00-10:00 PM Panel Discussion on "Pre- and Post-Operative Care of the Surgical Patient."  
F. A. Coller, M.D., Ann Arbor, *Moderator*  
L. C. Carpenter, M.D., Grand Rapids  
R. L. Mustard, M.D., Battle Creek  
D. J. Leithauser, M.D., Detroit

**FRIDAY, MARCH 14, 1947**

- 8:30 AM *Registration—Exhibits Open—Italian Garden, Fourth Floor, Book-Cadillac Hotel*

## Grand Ballroom

**S. W. Hartwell, M.D., Muskegon, *Chairman***

- |             |    |  |                                      |
|-------------|----|--|--------------------------------------|
| 9:00- 9:20  | AM | "Physical Medicine".....                             | Col. A. E. White, M.C., Battle Creek |
| 9:20- 9:40  |    | "Surgical Management of Cranio-Cerebral Trauma"..... | E. S. Gurdjian, M.D., Detroit        |
| 9:40-10:00  |    | "The Use of X-Ray in Obstetrics".....                | E. Walter Hall, M.D., Detroit        |
| 10:00-11:00 |    | Intermission to View Exhibits                        |                                      |
| 11:00-11:20 |    | "Neonatal Care".....                                 | J. L. Wilson, M.D., Ann Arbor        |
| 11:20-11:40 |    | "Management of Urinary Tract Infections".....        | R. M. Nesbit, M.D., Ann Arbor        |
| 11:40-12:00 |    | "Rheumatic Fever".....                               | H. H. Riecker, M.D., Ann Arbor       |
| 12:15- 1:15 | PM | LUNCHEON, English Room                               |                                      |
|             |    | A. C. Furstenberg, M.D., Ann Arbor, <i>Chairman</i>  |                                      |
| 1:15- 1:45  |    | "The Intelligent Use of Antibiotics".....            | G. B. Myers, M.D., Detroit           |

## Grand Ballroom

A. H. Kretchmar, M.D., Flint, *Chairman*

- 2:00- 2:40 PM CLINICAL-PATHOLOGICAL CONFERENCE—Subject: Gynecology  
Conducted by Donald C. Beaver, M.D., Detroit
- 2:40- 3:00 "Common Skin Diseases".....E. A. Hand, M.D., Saginaw
- 3:00- 4:00 Final Intermission to View Exhibits
- 4:00- 4:20 "Peritoneoscopic Studies in Epidemic Jaundice".....T. A. Horan, M.D., Detroit
- 4:20- 4:40 "Cancer of the Uterus".....A. E. Catherwood, M.D., Detroit
- 4:40- 5:00 "Early Recognition of Carcinoma of Colon and Rectum"  
L. J. Hirschman, M.D., Detroit

## End of Conference



# Contributions and Pledges to Michigan Foundation for Medical and Health Education

From September 18, 1945 to February 1, 1947

Allegan County Medical Society.....	\$ 85.	Macomb County Medical Society.....	130.
Anonymous (Memory of Mother).....	\$ 1,000.	Manistee County Medical Society.....	100.
Regis F. Asselin, M.D., Detroit.....	5.	Marquette-Alger County Medical Society.....	135.
R. H. Baribeau, M.D., Battle Creek.....	50.	F. F. McMillan, M.D., Charlevoix.....	100.
Barry County Medical Society.....	50.	Mason County Medical Society.....	35.
M. G. Becker, M.D., Edmore.....	1,000.	Mecosta-Osceola-Lake County Medical So-	
A. P. Biddle Estate.....	2,933.81	ciety .....	45.
Branch County Medical Society.....	85.	H. A. Meinke, M.D., Hazel Park.....	50.
C. D. Brooks, M.D., Detroit.....	1,000.	Menominee County Medical Society.....	55.
J. D. Bruce, M.D., Ann Arbor.....	1,000.	Michigan Medical Service.....	10,000.
A. S. Brunk, M.D., Detroit.....	1,000.	Mrs. K. B. Miner, Flint.....	1,000.
E. I. Carr, M.D., Lansing.....	1,000.	Monroe County Medical Society.....	145.
H. R. Carstens, M.D., Philadelphia, Pa.....	1,000.	H. R. Moore, M.D., Newaygo.....	1,000.
L. G. Christian, M.D., Lansing.....	100.	H. L. Morris, M.D., Detroit.....	1,000.
R. E. Clark, M.D., Detroit.....	25.	Muskegon County Medical Society.....	310.
Clinton County Medical Society.....	50.	R. L. Mustard, M.D., Battle Creek.....	1,000.
C. V. Costello, M.D., Holland.....	1,000.	Cora Boyce Neal, Grand Rapids.....	1,000.
H. H. Cummings, M.D., Ann Arbor.....	1,000.	Ontonagon County Medical Society.....	15.
A. C. Curtis, M.D., Ann Arbor.....	15.	Wm. H. Parks, M.D., Petoskey.....	100.
J. S. DeTar, M.D., Detroit.....	1,000.	A. W. Petersohn, M.D., Battle Creek.....	25.
Dickinson-Iron County Medical Society.....	80.	L. B. Rasmussen, M.D., Vicksburg.....	25.
Eaton County Medical Society.....	70.	Lawrence Reynolds, M.D., Detroit.....	1,000.
A. C. Furstenberg, M.D., Ann Arbor.....	1,000.	J. M. Robb, M. D., Detroit.....	1,000.
L. J. Garipey, M.D., Detroit.....	1,000.	J. M. Robb, M.D., Detroit	
Genesee County Medical Society.....	1,000.	(Memorial to the late J. D. Bruce, M.D.)....	100.
Robt. W. Gillman, M.D., Detroit.....	1,000.	John Rodger, M.D., Bellaire.....	100.
Gratiot-Isabella-Clare County Medical So-		G. B. Saltonstall, M.D., Charlevoix.....	1,000.
ciety .....	125.	Sanilac County Medical Society.....	50.
Grand Traverse-Leelanau-Benzie County Med-		C. A. Scheurer, M.D., Pigeon.....	20.
ical Society .....	167.50	E. F. Sladek, M.D., Traverse City.....	5,000.
T. J. Heldt, M.D., Detroit.....	25.	Ferris N. Smith, M.D., Grand Rapids.....	1,000.
Lee Hileman, M.D., Ecorse.....	10.	St. Clair County Medical Society.....	220.
Hillsdale County Medical Society.....	95.	Shiawassee County Medical Society.....	1,000.
L. J. Hirschman, M.D., Detroit.....	1,000.	H. B. Steinbach, M.D., Detroit.....	100.
L. E. Holly, M.D., Muskegon.....	1,000.	R. H. Stevens, M.D., Detroit.....	1,000.
Houghton-Baraga-Keweenaw County Medical		C. L. Straith, M.D., Detroit.....	1,000.
Society .....	140.	R. H. Strange, M.D., Mt. Pleasant.....	1,000.
R. J. Hubbell, M.D., Kalamazoo.....	1,000.	Jerrian VanDellen, M.D., East Jordan.....	100.
Huron County Medical Society.....	55.	Ralph Wadley, M.D., Lansing.....	1,000.
Wm. A. Hyland, M.D., Grand Rapids.....	1,000.	R. V. Walker, M.D., Detroit.....	1,000.
Ingham County Medical Society.....	1,572.50	Washtenaw County Medical Society.....	200.
S. W. Insley, M.D., Detroit.....	1,000.	H. L. Weitz, M.D., Traverse City.....	100.
Jackson County Medical Society.....	350.	C. G. Wencke, M.D., Battle Creek.....	10.
Joint Committee on Health Education.....	1,000.	E. L. Whitney, M.D., Detroit.....	25.
Francis Jones, M.D., Lansing.....	1,000.	S. B. Winslow, M.D., Battle Creek.....	50.
F. H. Lashmet, M.D., Petoskey.....	100.	E. R. Witwer, M.D., Detroit.....	1,000.
Lenawee County Medical Society.....	125.	Margaret H. Zalen, M.D., Kalamazoo.....	5.
S. R. Light, M.D., Kalamazoo.....	100.		

(Pledge Card on Page 172)



## The Mary E. Pogue School

Complete facilities for training Retarded and Epileptic children educationally and socially. Pupils per teacher strictly limited. Excellent educational, physical and occupational therapy programs.

Recreational facilities include riding, group games, selected movies under competent supervision of skilled personnel.

Catalogue on request.

G. H. Marquardt, M.D.  
Medical Director

Barclay J. MacGregor  
Registrar

26 GENEVA ROAD, WHEATON, ILL.  
(Near Chicago)



*To restore nasal patency  
in colds and sinusitis . . .*

Neo-Synephrine decongests promptly . . . clears the nasal airways for greater breathing comfort . . . promotes sinus drainage. Relief lasts for several hours. Virtual freedom from compensatory vasodilatation precludes development of dependency symptoms.

## Neo-Synephrine

BRAND OF PHENYLEPHRINE  
HYDROCHLORIDE

*For Nasal Decongestion*

**THERAPEUTIC APPRAISAL:** Prompt, prolonged nasal decongestion without appreciable compensatory recontraction; virtual freedom from local and systemic side effects; sustained effectiveness on repeated use.

**INDICATED** for symptomatic relief of the nasal congestion of common colds, sinusitis and allergic rhinitis.



**ADMINISTRATION** may be by dropper, spray or tampon, using the 1/4% in most cases, the 1% when a stronger solution is indicated.

**SUPPLIED** as 1/4% and 1% in isotonic saline and 1/4% in Ringer's with aromatics, bottles of 1 fl. oz.; 1/2% jelly in convenient applicator tubes, 3/8 oz.

*Frederick* Stearns & Company  
Division

DETROIT 31, MICHIGAN

NEW YORK KANSAS CITY SAN FRANCISCO WINDSOR, ONTARIO SYDNEY, AUSTRALIA AUCKLAND, NEW ZEALAND

Trade-Mark Neo-Synephrine Reg. U. S. Pat. Off.

# Michigan Hospital Service

## Veterans Program

Michigan Hospital Service has been authorized by the Veterans Administration to contact all accredited hospitals and sanatoriums in Michigan and endeavor to obtain from them an agreement to provide authorized hospital care to the eligible veteran. This activity on the part of Michigan Hospital Service was not confined to those institutions participating in the Michigan Blue Cross Plan, but was extended to include all hospitals in this state carrying the seal of approval of the American Medical Association and/or the American College of Surgeons.

As of January 1, some one hundred and forty Michigan institutions, representing General, Medical and Surgical hospitals, Tuberculosis Sanatoriums, as well as institutions for the care of the Nervous and Mental, had submitted contracts to participate in this program. The geographic distribution of these hospitals is such as to enable the veteran, in almost every instance, to obtain authorized hospital care in the immediate vicinity of his home environment.

In this regard, too, the Veterans Administration has embarked on a program of decentralization that will enable them to serve the veteran better and provide solutions to the veterans' problems rapidly and at a local level. Six sub-regional offices have been established at key points throughout Michigan:

Veterans Administration  
Henry A. Mosher, Sub-Regional Manager  
First National Bank Building  
621 Ludington Street  
Escanaba, Michigan

Veterans Administration  
John Musgrave, Sub-Regional Manager  
109 West Third Avenue  
Flint 4, Michigan

Veterans Administration  
Willard E. Asman, Sub-Regional Manager  
540 Keeler Building  
Grand Rapids, Michigan

Veterans Administration  
R. K. Smith, Sub-Regional Manager  
135 N. Westnedge  
Kalamazoo 47, Michigan

Veterans Administration  
Frank Campbell, Sub-Regional Manager  
County Court House  
Jackson, Michigan

Veterans Administration  
Richard Calkins, Sub-Regional Manager  
201 Board of Commerce Building  
Saginaw, Michigan

These sub-regional offices are now staffed with personnel capable of reviewing the facts of the various veterans' cases, and on the basis of this information will, whenever necessary, issue instructions to Michigan Hospital Service and Michigan Medical Service to release authorizations that will provide the veteran with the needed medical and hospital care by the physician of the veteran's choice and the facilities of the hospital wherein his doctor has staff privileges.

### Red-tape Reduced by MHS

Special reporting forms have been prepared that will enable the contract hospital or sanatorium to request extensions of the veteran's stay whenever the attending physician deems this necessary.

Similar forms permit the institutions under contract to report to the Veterans Administration any change in the patient's diagnosis apart from the one for which he was admitted.

Special rules have also been established to cover those instances when the emergent nature of the case has required the veteran's admission to the contract hospital before proper authorization has been procured.

With the co-operation of the Veterans Administration, Michigan Hospital Service has made every effort to reduce the paper work necessary to the functioning of this program to an absolute minimum.

Authorizations for the hospital care go forward to the veteran and the contract hospital the same day the Veterans Administration approves these cases. The necessary information pertaining to the veteran, such as name, address, claim number, length of stay authorized, and admitting diagnosis,

*(Continued on Page 172)*



# Díabetes, díet and Globín Insulín...



**T**HE ADVANTAGES of one-injection control of diabetes can, through adjustment of diet and dosage, be made available to the majority of patients requiring insulin. In view of the convenience and freedom afforded by the unique intermediate action of 'Wellcome' Globin Insulin with Zinc, the necessary adjustment is well worth while. Though not a complicated procedure, the regulation of carbohydrate balance warrants reiteration because of its importance:

**SOME FACTS ABOUT DIETARY ADJUSTMENT:** The distribution of carbohydrate in the meals must be adjusted in accord with the type of action exhibited by Globin Insulin, which is intermediate between regular and protamine zinc insulin. Proper carbohydrate distribution with proper insulin timing is essential; lack of balance may lead to poor control or to an erroneous impression of the characteristics of Globin Insulin.

A good carbohydrate distribution for the patient on Globin Insulin is to divide the total carbohydrate per day into 1/5 at breakfast, 2/5 at

lunch and 2/5 at suppertime. This initial diet may be adjusted in accord with the indications of blood sugar levels and urinalyses. (For example, a low blood sugar before supper indicates too little carbohydrate for lunch or vice versa.)

Globin Insulin is ordinarily given before breakfast. Onset of action is usually sufficiently rapid to eliminate the need for a supplementary injection of regular insulin. However, the amount of breakfast carbohydrate should not be too large. The right amount, as well as the optimal time interval between the injection and breakfast, must of course be determined for each patient.

Since the maximum action of Globin Insulin usually occurs in the afternoon or early evening, hypoglycemia is sometimes noted at this time. As a guard against it, the carbohydrate content of the noon meal may be increased, or a midafternoon lunch provided. Thus the original distribution of 1/5, 2/5 and 2/5 might, for example, require adjustment to 2/10, 5/10 and 3/10 or to 2/10, 4/10, 1/10 and 3/10. Once the balance of carbohydrate intake and insulin timing has been established, the patient must be impressed with the importance of adhering to the regimen.

'Wellcome' Globin Insulin with Zinc is a clear solution, comparable to regular insulin in its freedom from allergenic properties. Available in 40 and 80 units per cc., vials of 10 cc. Accepted by the Council on Pharmacy and Chemistry, American Medical Association. Developed in The Wellcome Research Laboratories, Tuckahoe, New York. U.S. Patent No. 2,161,198. LITERATURE ON REQUEST.

'Wellcome' Trademark Registered



BURROUGHS WELLCOME & CO. (U.S.A.) INC., 9 & 11 EAST 41ST STREET, NEW YORK 17, N.Y.

## MICHIGAN HOSPITAL SERVICE

(Continued from Page 170)

are all on the form prepared by the veterans section of Michigan Hospital Service. This activity on our part relieves the business office of the hospital of a considerable amount of work. The heading of the bill for services rendered, which the hospital forwards to Michigan Hospital Service following the discharge of the veteran, is also prepared in the Michigan Hospital Service office, and accompanys the initial authorization to the contract hospital.

Contract hospitals are instructed to bill Michigan Hospital Service at the end of each calendar month, for the authorized care rendered the eligible veteran. These statements are then processed and sent to accounting with the intention of paying Michigan hospitals each month for veteran's care as authorized, rendered, and billed.

### Tuberculosis Sanatoriums

The chief of the Tuberculosis Section, Veterans Administration, appealed to Michigan Hospital Service to approach the tuberculosis sanatoriums of Michigan and endeavor to obtain from them an assignment of some two hundred and fifty contract beds for the care of the tuberculosis veteran.

These sanatoriums in response to this appeal are

now in the process of submitting contracts that will place more than four hundred beds at the disposal of the Veterans Administration, should this number be needed. This especially fine effort will be more than appreciated by those veterans needing this type of care, because the distribution of sanatoriums throughout the state, signifying their intention of co-operating in this need, is such as to enable the veteran, in most cases, to be hospitalized within the immediate vicinity of his home environment.

Two points of major interest are:

1. The Veterans Administration requires that this effort on the part of Michigan Hospital Service shall be without profit to them.

2. These contract hospitals have entered into an agreement with the Veterans Administration, through Michigan Hospital Service, to provide hospital care to the eligible veteran on a basis of cost, and they are required under the terms of the contract to provide hospital service in any needed quantity *without any additional charge to the veteran*, accepting as payment in full reimbursement from the Veterans Administration on the basis of the per diem cost as determined through their statement of operating expenses reported to this governmental agency.

Name .....  
Office Add. .... City.....  
Res. Add. .... City.....

I hereby pledge to the

**MICHIGAN FOUNDATION FOR MEDICAL AND HEALTH EDUCATION**  
2020 Olds Tower, Lansing 8, Michigan, for the twelve-month period  
beginning March 1, 1947, the sum of

TOTAL PLEDGE	PAID HEREWITH	BALANCE DUE
\$	\$	\$

My contribution is

Please

Check

Your

Choice



- |  |   |
|--|---|
| (1) In Cash<br>or (2) In War or Victory Bonds<br>or (3) In Life Insurance<br>or (4) As a Memorial<br>or (5) In my Will | <input type="checkbox"/> to be paid in the total sum<br>or in annual payments of \$.....<br><input type="checkbox"/> to be paid in the total sum<br>or in annual payments of \$.....<br><input type="checkbox"/> to the memory of:<br>.....<br><input type="checkbox"/> |
|--|---|

SIGNATURE .....

# Men and Amino Acids

---



EMIL FISCHER—1852-1919

Emil Fischer—brilliant investigator, profound thinker, noted teacher—made possible, by his researches, most of the greatest advances in protein chemistry. His versatility and inspired imagination, coupled with a genius for experimental research, contributed basic knowledge of the greatest value to nutritional science. He did fundamental work on purines and sugars; laid the foundations of enzyme chemistry; and made stereochemistry a tool of research. He separated the amino acids from protein hydrolysates by his epoch-making distillation method; and not only ascertained many of the constituent amino acids of protein molecules but recombined them into synthetic peptides approximating natural substances, by virtue of his recognition of the peptide linkage.

His brilliant work brought him recognition from most of the important scientific societies of the world. The Royal Society awarded him the Davy Medal and elected him a foreign member, and in 1902 he became Nobel Laureate in Chemistry.

---

## *The Arlington Chemical Company*

Yonkers 1,



New York

*Second in a Series*



# Postgraduate Continuation Courses

## WAYNE UNIVERSITY COLLEGE OF MEDICINE

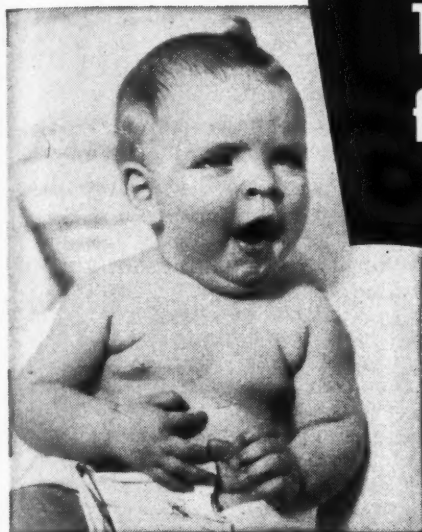
Quarter begins on March 3, 1947

These courses are open to all qualified persons.

Veterans who are not residents in a Detroit hospital should make arrangements for tuition, as provided by the GI Bill, with Mr. Don Palmer, Veteran Administrator at Wayne University.

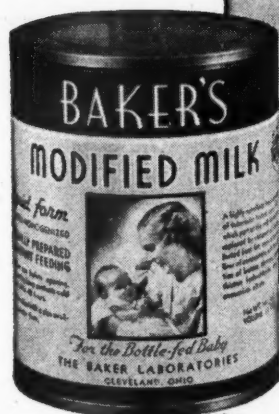
Registration for these courses can be made in the office of the Director of Graduate Medical Education at the College of Medicine any time before March 3, 1947.

<u>Title of Course</u>	<u>Place</u>	<u>Time</u>	<u>Fee</u>
<b>Anatomy</b>			
Regional Anatomy	College of Medicine		
Trunk (Begins Feb. 19)	(Limit 50)	Wed. 1-5	\$50
Extremities and Back	(Limit 50)	Thurs. 2-5	50
Head and Neck	(Limit 50)	Fri. 1-5	50
Problems in Neurology	College of Medicine	Thurs. 3-5	25
<b>Bacteriology</b>			
Immunology and Virology	College of Medicine	Wed. 1-5	\$35
<b>Physiological Chemistry</b>			
Nutrition	College of Medicine	Mon., Wed., Fri. 11-12	\$25
Seminar	College of Medicine	Wed. 4-5	10
Intermediary Metabolism of the Lipides	College of Medicine	Thurs. 4-5	10
<b>Dermatology</b>			
Neoplasms of the Skin	College of Medicine	Tues. 6-9	\$35
Seminar	Receiving Hospital	Wed. 10-11:30	10
Conference on Venereal Diseases	Social Hygiene Clinic	Thurs. 3-4:30	10
<b>Medicine</b>			
Medical X-Ray Conference	(a) Receiving Hospital	Tues. 11-12	\$10
	(b) Wayne County Gen.	Fri. 1-2	10
Gastroenterology Clinic	Receiving Hospital	Wed. 1-2	10
Therapeutic Conference	Receiving Hospital	Thurs. 11-12	10
and Hematology Clinic			
Medical Pathologic Conference	(a) Receiving Hospital	Fri. 11-12	10
	(b) Wayne County General	Thurs. 11-12	10
Diagnostic Conference	Wayne County General	Tues. 4-5	10
Beginning Electrocardiography	Wayne County General	Fri. 11-12	10
<b>Pathology</b>			
Advanced Hematology	College of Medicine	Mon. 1-5	\$35
(Limited to 5 who had Beg. Hematology)			
Gynecologic Pathology	College of Medicine	Wed. 1-5	35
	(Limit 35)		
Pathology of Children's Diseases	College of Medicine	Fri. 1-5	35
	(Limit 25)		
Beginning Hematology	College of Medicine	Fri. 1-5	35
<b>Pharmacology</b>			
Seminar in Pharmacology	College of Medicine	Tues. 3:45-5	\$10
Physical Medicine	Grace Hospital	Thurs. 1-5	35
<b>Physiology</b>			
Blood	College of Medicine	Tues. 4-5	\$25
		Fri. 3-5	
<b>Radiology</b>			
Seminar Conference in Radiology	Affiliated Hospitals	Alternate Mondays 6:30-8	\$10
	(First session March 3)		
<b>Surgery</b>			
Seminar in Surgery	College of Medicine	Thurs. 4-5	\$10
	(Limit 20)		

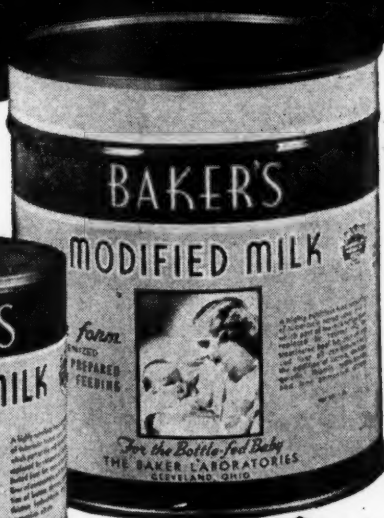


## The "One Prescription" Food for Bottle-fed Infants.....

- for full-term or premature infants
- from birth to end of bottle feeding
- complementary to mother's milk, or exclusively



**LIQUID**



**POWDER**

Start with either and change from one to the other, to suit individual requirements. Powder form is especially convenient when traveling.

Many physicians prescribe Baker's Modified Milk for the majority of their bottle-fed infant cases. They prefer Baker's Modified Milk because few cases require any change at any time, except increased quantity as the baby grows older.

Baker's Modified Milk is a time-saver for the doctor and for the mother, for it is a completely prepared food that requires no complicated feeding directions (just dilute with water, previously boiled) and therefore reduces the possibility of error.

Among the many other reasons for the wide prescription of Baker's Modified Milk are:

- Baker's Modified Milk is a complete food (except for Vitamin C) that closely conforms to human milk in nutritional results . . .
- . . . is well tolerated by both premature and full-term infants . . .
- . . . may be used either complementary to or entirely in place of human milk . . .
- . . . is helpful in correcting regurgitation, constipation, loose or too-frequent stools . . .

Just leave instructions at the hospital. The obstetrical supervisor will be glad to put your next bottle-fed infant on Baker's Modified Milk.

• Baker's Modified Milk is made from tuberculin-tested cows' milk in which most of the fat has been replaced by animal and vegetable oils with the addition of lactose, dextrose, gelatin, iron ammonium citrate, vitamins A, B<sub>1</sub> and D. Not less than 400 units of vitamin D per quart.

*Complete information and samples gladly sent to physicians on request.*



# BAKER'S MODIFIED MILK

THE BAKER LABORATORIES, INC., CLEVELAND, OHIO

BRANCH OFFICES: SAN FRANCISCO, LOS ANGELES and DENVER

FEBRUARY, 1947

*Say you saw it in the Journal of the Michigan State Medical Society*

175

## "Socialized Medicine--Bad Medicine For You"

Michael Wright, in *Better Homes and Gardens* for January, 1947, writes an illuminating article under the above heading. The sub-head states, "America might better provide for proper health education instead of a socialized system that can lead only to inferior medical care for everybody."

Quotable paragraphs abound in this excellent exposé of the "medical planners," such as the following:

"In most all communities, except a few rural ones, there are agencies, clinics, and hospitals that provide care entirely free or at costs the people can afford.

"The trouble was not that most of these men could not get care. It was that they were afraid. That they were lax. They placed other things first—wrong things. Many a man will take better care of his car than of himself. Let the motor pound or the rear end lump, and he heads straight for the garage, pays a big bill for the cure. But this same man will himself pound and lump along for months, dosing with vitamins, taking pills to correct his 'acid condition.' Anything to forestall the evil day of going to the doctor who may tell him what he dreads to hear—goiter, ulcers, cancer, surgery, something.

"It takes more than prepaid care to bring a man health.

"As for periodic checkup, the attitude is: Who wants to go to the doctor when there's nothing wrong? He'll think you're a nut, a neurotic, a hypochondriac.

"There are many, of course, who actually are. When their bill is already paid by socialized medicine, they run to the doctor with everything. They want all that is coming to them. They call their doctor at all hours of day or night for mere trivialities. 'I am very sick. You must come right away.' The doctor becomes discouraged, disgusted. And soon he comes to think: 'What does it matter what kind of medicine I practice?'

"Rather than socializing medicine, would it not make more sense to put all our education, all our production and distribution of food, houses, and clothing under the thumb of the social security administrator? Then, through pay-roll deduc-

tions, we might guarantee everyone a quart of milk a day, steak, a car, and a Cape Cod cottage.

"Or is that what Wagner, Murray, and Dingell are really up to?

"A person who needs help should have it. So far as possible he should make his own way. Beyond that, he should have help. But not in a manner that will tear down the quality of medical care to the rest of us.

"Not in a manner that will destroy private practice.

"Not in a manner that will destroy the voluntary hospital system.

"Not in a manner that will give one man control over medical research and education.

"Not in a manner that will bind the physician in political slavery.

"Not in a manner that makes men leeches, hypocrites, and servile to their government, without the will to fight unceasingly for freedom."

### STOP—LOOK—LISTEN

STOP telling the patient there is nothing wrong with him but nerves. Don't say, "Go home and forget it."

LOOK for the facts as the patient sees them.

LISTEN attentively to patient's story.

\* \* \*

Parents place too high a premium on submissiveness in their children.

\* \* \*

The type of complaint is often not so important as the type of person who has the complaint.

Youth is always looking for new places and experiences. He is curious! Help him. Plan with him. Direct him.

\* \* \*

Some good nose and throat physicians are courageous enough to tell the patient that the sinuses are not the trouble, and to refer him to a psychiatrist.

\* \* \*

A common cause for divorce is a lack of emotional preparation for marriage.

\* \* \*

A child's adjustment to life is related to his parents' adjustment—to marriage—to parenthood—to social position.

\* \* \*

Do not wait for the child to outgrow his misbehavior. He needs lots of help.

MSMS MENTAL HYGIENE COMMITTEE.



# VITA-AMINO GRANULES

(Hartz)

## Chocolate flavored—pleasant to take

Containing the essential amino acids calculated on a 16% nitrogen basis.

Arginine	3.5%	Histidine	1.5%
Lysine	6.5%	Tyrosine	4.0%
Tryptophane	1.0%	Phenylalanine	3.5%
Cystine	1.6%	Methionine	2.0%
Threonine	3.3%	Leucine	6.4%
Isoleucine	4.7%	Valine	4.8%

It also contains in each 100 grams Thiamine .7 mg., Riboflavin 1 mg., Niacin 5 mg., Panthothenic Acid 2.5 mg., Pyridoxine .375 mg., Biotin .05 mg., Folic Acid .2 mg., Choline 50 mg.

## CHIEF INDICATIONS

The administration of Vita-Amino Hartz is intended to be oral and can be used as an addition to the daily menus in drinks or added to breakfast foods. Suitable protein hydrolysates given by mouth have been reported useful in the following conditions:

To provide acid binding molecules for patients with peptic ulcers or gastric hyperacidity and in addition to provide building material of damaged tissue. Also indicated in other types of ulcers and bedsores for speeding the healing of such conditions.

To provide building material for Antibody production in cases of bacterial infections where ordinary protein intake is restricted.

In providing readily assimilable nitrogen for patients with liver and kidney diseases.

For increasing the nitrogen intake of the aged and convalescent.

To maintain nitrogen equilibrium during periods of nitrogen loss due to diarrhea.

In the correction and prevention of edema due to protein insufficiency.

To replace the nitrogen losses due to severe burns.

To supplement protein intake during pregnancy.

Supplied in 8 oz. and 1 lb. Sizes

For Convenient Dispensing



LABORATORY OF  
**THE J. F. HARTZ CO.**

1529 Broadway, Detroit • Cherry 4600

PHARMACEUTICAL MANUFACTURERS • MEDICAL SUPPLIES

# You and Your Business

## **WILLIAM S. McNARY APPOINTED MHS EXECUTIVE VICE PRESIDENT**

The appointment of William S. McNary as its permanent executive vice president and general manager by the trustees of Michigan Hospital Service, has been announced by George M. Welch, president. The new appointment was effective February 1, 1947.

McNary, formerly executive director of Colorado Hospital Service, brings to the Michigan Plan a tremendous amount of business and hospital experience. A graduate of the University of Colorado in business administration, he was business manager of Colorado General Hospital until he resigned in 1938 to become executive director of the Blue Cross Plan in that state, a position he has held up to the present time. In 1943 McNary was elected to the important nine-man Blue Cross Commission, a policy-making body for the eighty-seven Blue Cross Plans in the United States, Canada and Puerto Rico. He is also chairman of its Subcommittee for National Individual Enrollment.

As general manager of the Michigan Hospital Service, McNary is directing the third largest Blue Cross organization in the United States. Present enrollment in the Michigan Plan exceeds 1,165,000.

John W. Paynter, acting general manager on loan from the J. L. Hudson Company, returned to his position as assistant controller of that organization as soon as the permanent general manager assumed his new duties.

## **POSTGRADUATE COURSE IN RADIOLOGY**

One hundred radiologists will be selected to attend the postgraduate courses in radiology to be conducted March 30 through April 4 in Philadelphia by the American College of Radiology. Preference will be given to radiologists who served in World War II. Second preference will be given to qualified applicants who were unable to obtain admission to last year's course in Philadelphia. The course is sponsored jointly by the American College of Radiology and the Philadelphia Roentgen Ray Society.

Because of the popularity of the course given in Philadelphia last year, many radiologists were unable to be enrolled. Numerous requests for a second similar course have prompted the committee to sponsor it again this year.

There are two main considerations which have impelled the committee to undertake this program:

Although national and local scientific societies in the specialty of radiology have maintained a consistently high standard in their regular meetings, numerous inquiries have indicated an obvious need for intensive courses of a more academic nature. Also, veteran medical officers have been felt to be in need of an intensive review before returning to private practice. Many of these men were denied the opportunity for normal

clinical practice or study which would keep them abreast of the rapid progress in the specialty of radiology.

Some of the subjects to be studied are certain neoplastic and inflammatory diseases, carcinoma of the head and neck, dosage calculation and tumor sensitivity in radiation therapy, carcinoma of the breast, blood and hemopoietic diseases, carcinoma of the genital and urinary tract, benign and malignant diseases of the skin.

## **PROGRESS REPORT OF WAYNE MEDICAL SCIENCE CENTER**

1. Establishment, in October, 1943, of a medical center headquarters office with a full-time executive secretary.

2. Incorporation, in November, 1943, of the Medical Science Center of Wayne University as a Michigan non-profit corporation. Thus was provided an agency with which to operate, receive money, and make and keep commitments.

3. Raising of a Promotion Fund of approximately \$80,000, of which more than \$69,000 was subscribed by the Medical Science Center's Board of Directors, with which to engage fund-raising counsel, conduct the Medical Science Center's headquarters office, and administer donations. Thus none of these costs has been charged against donations. Every cent of donated money has been or will be used for the purpose specified by the donor.

4. Selection of a fifteen-block site east of the Art Center as best for Medical Science Center purposes.

5. Obtaining of approval of this site from the Board of Education, the City Plan Commission, and Wayne University.

6. Appointment of Smith-Hinchman and Grylls, Inc., as Medical Science Center architects.

7. Preparation by the architects of a master plan encompassing all future units of the Medical Science Center.

8. Employment of the American City Bureau, of Chicago, as fund-raising counsel. From May through December, 1944, the Medical Science Center used from one to three American City Bureau staff men, plus secretarial help. These experts conducted a city-wide survey and reported that the project was both sound and badly needed, and that the money could be raised in a series of cycles over a ten-year period. They helped crystallize plans, prepared prospect lists, and did much other preliminary work that will be invaluable when campaign plans are resumed.

9. Employment of Dr. Basil C. MacLean, director of Strong Memorial Hospital, Rochester, New York, an internationally recognized authority on the building, equipping and operation of hospitals and similar units, as medical consultant to the Medical Science Center.

*(Continued on Page 180)*

mortality reduction

## in intestinal surgery

Clinical reports continue to substantiate the exceptional effectiveness of 'Sulfasuxidine' succinylsulfathiazole as an enteric bacteriostat in intestinal surgery. After employing the drug, together with other appropriate measures, in the preoperative preparation of 50 patients for intestinal anastomosis, two distinguished clinicians concluded:

**"Preparation with succinylsulfathiazole and aseptic anastomosis are factors in reducing the mortality rate."**

'Sulfasuxidine' succinylsulfathiazole is effective also in the treatment of acute or chronic bacillary dysentery, as well as the carrier state of the disease, and in ulcerative colitis. Supplied in 0.5-Gm. tablets in bottles of 100, 500 and 1,000 as well as in powder form in ¼-pound and 1-pound bottles. Sharp & Dohme, Phila. 1, Pa.



\*Surg., Gynec. & Obst. 81:593, December, 1945

'SULFA

SUXIDINE'

*Succinylsulfathiazole*



# PROGRESS REPORT OF WAYNE MEDICAL SERVICE CENTER

(Continued from Page 178)

Since October, 1944, Dr. MacLean and his associate, Mr. Lawrence J. Bradley, have been of vast help in general planning.

10. Establishment, in February, 1945, of the School of Occupational Health, as a part of Wayne University, and the employment of Dr. Raymond Hussey as its dean.

11. Granting of \$12,500 for the purchase of equipment for the Department of Anatomy of the Wayne University College of Medicine.

12. Complete revision of plans for the Medical Science Center by a Wayne University Planning Committee headed by Dr. David D. Henry. This revision was made necessary by the recommended enlargement of Medical Science Center units and program. The work of revision extended throughout all of the calendar year of 1945. The Planning Committee achieved it in collaboration with the Medical Education Committee of the Wayne County Medical Society and with the faculties of Wayne University colleges and departments that are concerned with the Medical Science Center. The Planning Committee deserves highest commendation for its careful and thorough work. So do the architects, and Dr. Basil C. MacLean, medical consultant to the Medical Science Center.

13. Thorough canvass of prospective donors of large "challenge gifts" on which a campaign for the goal of the first cycle—approximately \$16,000,000—could be based. While, as has been pointed out, no substantial "challenge gifts" are obtainable at this time, a thorough groundwork has been laid and further approaches to these same prospects will be made at a future and favorable time.

## PUBLIC RELATIONS PROGRAMS GET UNDER WAY

Public Relations programs were established in many states during the past year. To facilitate the work a number of state societies have established full time public relations departments. Each society is urged to develop this field of activity. Available information concerning definite P. R. programs may be obtained from the following:

G. H. Saville, Ohio State Medical Association, 79 East State Street, Columbus.

Jack Meadors, South Carolina Medical Association, 105 West Cheves Street, Florence.

James G. Burch, Connecticut State Medical Society, 258 Church Street, New Haven.

Dwight Anderson, Medical Society of the State of New York, 292 Madison Avenue, New York.

Hugh Brenneman, Michigan State Medical Society, 2020 Olds Tower, Lansing.

Henry S. Johnson, Medical Society of Virginia, 1200 East Clay Street, Richmond.

Frank Lais, Jr., Louisiana State Medical Society, 1430 Tulane Avenue, New Orleans.

—Bulletin Council on Medical Service, AMA.

## Communication

### To the Secretaries of all Component County Medical Societies:

The following resolution was presented to the House of Delegates of the American Medical Association at its Supplemental Session held in Chicago, December 9 to 11, 1946. This was referred to the Reference Committee on Legislation and Public Relations and the Reference Committee recommended to the House that it be referred to the Board of Trustees of the Association for future action. The House of Delegates adopted the recommendation of the Reference Committee.

WHEREAS, Public relations, as pertains to organized medicine, has a most important field of effort in reaching and giving information to and receiving suggestions from the rank and file of doctors who give medical service to the public the country over; and

WHEREAS, Efforts in this direction have been so successfully carried on by the secretaries' conferences sponsored by several of the state medical societies; and

WHEREAS, There is no national group at present functioning in this capacity; therefore be it

RESOLVED, That the American Medical Association sponsor a national conference of officers of county medical societies which shall meet yearly just preceding the annual session of the House of Delegates of the American Medical Association for the purpose of bringing to the annual session the diverse problems of the various localities, the exchange of ideas which would be helpful to the state conferences, in such matters as voluntary health insurance plans, hospitalization plans, construction of new hospitals in needed places, and improvement in medical facilities, rural health activities, nursing activities and the activities of the various Councils of the American Medical Association.

The Board of Trustees after consideration of the resolution plans to have a meeting of this nature in Atlantic City, New Jersey, probably on Sunday, June 8, 1947.

This letter is for your information so that should you plan to attend the Centennial Celebration at Atlantic City, you can arrange to arrive one day early for the Sunday meeting. I shall write you later concerning the definite hour and place of the meeting.

Sincerely,

GEORGE F. LULL, *Secretary,*  
American Medical Association.

### President Truman's Letter to Congress

"Over a year ago I presented to the Congress my views on a national health program. The Congress acted on several of the recommendations of this program—mental health, the health of mothers and children and hospital construction. I urge the Congress to complete the work begun last year and to enact the most important recommendation of the program—to provide adequate medical care for all who need it, not as charity, but on the basis of payments made by the beneficiaries of the program."

# The JOURNAL

of the Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOLUME 46

FEBRUARY, 1947

NUMBER 2

## Treatment of H. Influenzae Meningitis

By H. E. Alexander, M.D.  
New York, New York



**D**URING THE PAST TEN years, antibacterial agents have become available in such rapid succession that there has scarcely been sufficient time for clinical evaluation before the discovery of new ones. The conclusions expressed in many publications and the efforts of

our daily press have been responsible for creating the impression that each new agent surpasses the older ones which may therefore be discarded. It would seem profitable to take stock of our factual data on the efficacy and indications for use of therapeutic agents in bacterial infections. This appears to be especially pertinent in treatment of H. influenzae infections, which will be the topic of this paper.

While severe infections caused by typable H. influenzae occur rarely in adults they constitute one of the frequent serious problems in pediatrics. The clinical pattern, however, is the same in all age groups, with meningitis, obstructive infections of the respiratory tract, and pneumonia being responsible for most of the severe varieties; an occasional example of suppurative arthritis is seen, often associated with osteomyelitis, and rarely pericarditis is caused by H. influenzae. Bacteremia is characteristically present in all of these clinical

varieties. Type *b* is responsible for virtually all severe H. influenzae infections; rarely Types *a* and *f* are causes. A survey of the distribution of typable H. influenzae in the Babies Hospital population over a five-year period indicates that febrile upper respiratory infection of a comparatively mild nature occurs as frequently as the severe varieties just mentioned and that very occasionally a well child harbors the organism. There is reason to believe that the last group represent carriers who have overcome a previous infection with H. influenzae. Nontypable varieties, normally present in the nasopharynx of well children and adults, very occasionally cause bacteremia and meningitis in young infants and subacute bacterial endocarditis in adults.

The first specific therapy used on a scale sufficient for evaluation was a horse antiserum, produced by Fothergill in 1931, for treatment of meningitis. In over 200 cases treated intravenously and intrathecally for many days, 84 per cent died. Sulfanilamide made its appearance in 1936 and was responsible for only an occasional recovery from influenzal meningitis. Sulfapyridine, which supplanted it in 1939, was a superior agent as judged both clinically and experimentally *in vitro* and *in vivo*. The clinical response to this sulfonamide was so superior to previous treatment that many responsible investigators considered the treatment of influenzal meningitis solved.

In 1938 there was adopted at the Babies Hospital, a treatment for H. influenzae meningitis which combined the inhibitory action of sulfonamides in conjunction with a rabbit antiserum specific for Type *b* H. influenzae. All of the knowledge then available of the biology of the influenza bacillus was applied in the production of this antibody. In our attempts to use this therapy most efficiently, certain facts became clear. The

The work reported in this communication was supported by grants from the Commonwealth Fund.

Presented at the eighty-first annual session of the Michigan State Medical Society, Detroit, September 25, 1946.

FEBRUARY, 1947

193

TABLE I. SCHEDULE OF DOSAGE BASED ON SPINAL FLUID SUGAR

Spinal Fluid Sugar (Mg. per cent)	Mg. Antibody Nitrogen Indicated
15	100
15 to 25	75
25 to 40	50
over 40	25

dose of antibody needed varied with the severity of infection. Therefore, some objective criterion of severity was essential. To relate the size of the dose to severity of infection, a method was needed for measurement of antibody in a given volume of serum. Moreover, the sufficiency of the original dose decided upon required confirmation.

1. The best index of severity of infection proved to be the concentration of sugar in the spinal fluid withdrawn before treatment; the lower the concentration, the greater the severity.

2. Heidelberger showed that the antibody in the rabbit antiserum could be measured by the quantitative chemical method for determining agglutinin and precipitin nitrogen. Mouse protection tests showed that the protective element in the antiserum was actually the anticarbohydrate antibody which this method measured in milligrams of antibody nitrogen per c.c. Thus it was possible to formulate a quantitative approach to treatment as shown in Table I.

3. This plan aimed to introduce at one time the amount of antibody necessary for recovery. Nonetheless, it was necessary to check its sufficiency. The capsular swelling capacity of the patient's serum following treatment proved to be a good guide. This test was performed daily through the period of activity of infection, and unless it could be shown that the patient's serum contained an excess of free antibody sufficient to cause capsular swelling of the organism when diluted 1:10, another dose of antiserum was administered (25 to 50 mg.).

This treatment was greatly simplified when it was learned that prompt recovery followed introduction of this antiserum by the intravenous route only. In a given case, sodium sulfadiazine is introduced by the subcutaneous route in a quantity equivalent to 0.1 gm. per kg. as soon as diagnosis of Type *b* H. influenzae is made. A continuous intravenous drip is set up immediately if there is urgent need of fluids, and 5 per cent glucose in

saline (approximately 30 c.c. per kg.) is administered over the next hour. Then the quantity of antibody, calculated according to Table I is diluted in physiologic saline (10 c.c. per kg.) and added to the reservoir of continuous drip apparatus. The speed is so regulated that the diluted antibody will be administered in two hours. Sulfadiazine is given orally as soon as feasible and continued for seven days after the first sterile spinal fluid is obtained. No additional serum is given unless the capsular swelling test shows inadequate excess of antibody in the patient's serum.

When patients are treated early with the combined therapy of sulfadiazine and type-specific rabbit antibody according to the principles outlined, the response has been so consistent that it is possible to predict not only the outcome but the course of recovery. Even in the fulminating group in which the meningitis progresses so rapidly that the spinal fluid sugar falls to less than 15 mg. per cent within twenty-four hours of onset, prompt recovery can be expected in all cases if sufficient antibody is administered in the initial dose. Actually only 80 per cent of the ninety patients treated according to this regime recovered, the failures being attributable to delay in diagnosis and to unwarranted confidence in the value of sulfonamides alone.

Nonetheless, it is clear that a certain proportion of patients do recover on sulfonamides alone. Our own clinical experience suggests that this fraction is small, and we are inclined to believe that the published records of isolated examples of cure with sulfonamides alone convey a false optimism as to the true efficacy of these agents. Over one-fourth of our cases received serum only after extended periods of unsuccessful sulfonamide therapy in other hospitals. Only two-thirds of this group recovered when serum was added; in virtually all of these, the infection had been kept under control during treatment but had not been eliminated, for on withdrawal of the drugs recrudescence occurred. This experience led us to study the criteria for selecting those patients who might be expected to recover on sulfonamides alone, and for this purpose we made a comparison of the protective value in mice of available sulfonamides alone, of antiserum alone and of the best sulfonamide and serum in conjunction. The results established the fact that the efficiency of sulfadiazine, the most effective of three sulfonamides tried, was dependent upon the size of the



bacterial population whether in the test tube or mouse, and suggested that it might be able to cure meningitis if used early in mild infections. Whereas the protection with sulfonamide alone never exceeded 10,000 minimum lethal doses (M.L.D.), when serum was added the mice withstood 1,000,000 M.L.D.

These observations resulted in the adoption of certain criteria for selection of patients who might be expected to recover on sulfadiazine alone. When meningitis has been present for only twenty-four hours, the infection is judged mild, as indicated by a concentration of sugar in the spinal fluid of 40 mg. or more per 100 c.c., and when the clinical features are in keeping with this, the use of sulfadiazine alone is justified initially. If *in vitro* tests indicate usual sensitivity of strain, it is believed that the drug alone may be continued without risk, provided clinical improvement ensues, and provided the spinal fluid shows the infection to be under control, with cultures sterile forty-eight hours after the start of chemotherapy. A minimum of two weeks of such treatment is essential for elimination of infection. It is of interest that, during a period when approximately thirty patients were treated, only two fulfilled the criteria which justified the use of sulfonamides alone.

It must be emphasized that these therapeutic recommendations refer only to meningitis. Experience with the other varieties of severe infections, pneumonia, obstructive infections of the respiratory tract, arthritis, et cetera, is much less extensive, but certain facts are clear. Sulfadiazine alone constitutes an effective treatment for *H. influenzae* pneumonia in older children. In infants under one year of age, especially when pneumonia is accompanied by empyema, the frequency of development of a complicating meningitis has led to the policy of using both antiserum and sulfadiazine. The characteristic clinical syndrome of epiglottitis, causing respiratory obstruction, responds promptly to sulfadiazine alone in the majority of patients, after tracheotomy. Only three of our sixteen patients have required antiserum in addition. When *H. influenzae* produces pyarthrosis and osteomyelitis, the possibility of injury to epiphysis and cartilage is so great that treatment should aim for the most rapid termination of infection. This is best accomplished by the simultaneous use of all effective therapeutic agents.

About a year ago, streptomycin became available. The demonstration of marked antibacterial

TABLE II. RELATION BETWEEN MEC\* ON LEVINTHAL AGAR AND MED† SUFFICIENT TO PROTECT MICE AGAINST TWENTY MILLION ORGANISMS PER MOUSE

Strain Number	Sensitive Strains		Resistant Strains	
	MEC	MED	MEC	MED
1	1.1	39.0		
1a			525.0	> 630.0
1b	13.0	39.0		
2	1.6	19.5		
2a			73.0	315.0
3	1.1	19.5		
3a			525.0	> 1,575.0
4	0.8	19.5		
4a			1,078.0	> 1,575.0
5	2.8-4.4	78.0		
5a			1,000.0	> 5,000.0

\*MEC—Minimum effective concentration *in vitro* units per c.c. of culture media.

†MED—Minimum effective dose units per mouse required for protection of 50 per cent of animals.

activity of this antibiotic on a number of other Gram-negative bacilli by Waksman and others suggested its trial against *H. influenzae*. Therapeutic trial was undertaken only after laboratory investigations had explored the range of sensitivity, *in vitro* and *in vivo*, of a representative number of strains of Type *b* *H. influenzae*. A simple *in vitro* test proved adequate for this purpose and, when used for testing cultures grown from biologic fluids after the start of treatment, served also as a reliable guide to the therapeutic efficacy of streptomycin in a given patient with influenzal meningitis. The results demonstrated a marked degree of sensitivity of this organism to streptomycin both *in vitro* and *in vivo*. Before exposure to streptomycin the MEC\* of over 50 strains ranged from 0.8 to 10.8 units per c.c. and the MED† of five of these varied from 19 to 78 units per mouse. After exposure to streptomycin, the strains in two patients exhibited resistance to more than 1,000 units per c.c. Likewise, sixteen originally sensitive strains, subcultured in gradually increasing concentrations of streptomycin, after periods of one to three weeks thrived in concentrations exceeding 525 units per c.c. Results from mouse protection tests showed a high degree of correlation with those obtained *in vitro*, as shown in Table II. Whereas five strains exhibiting MEC between 0.8 and 10.8 units per c.c. showed MED of 19 to 78 units per mouse, those strains which resisted high concentration *in vitro* (1,000

\*MEC—Minimal concentration of streptomycin which, when incorporated in Levinthal agar, completely inhibits growth of inoculum of three to 1,700 million organisms after an incubation period of forty-eight hours.

†MED—The smallest single dose of streptomycin which will protect 50 per cent or more of mice, each of which received twenty million organisms (1,000,000 M.L.D.).

## H. INFLUENZAE MENINGITIS—ALEXANDER

TABLE III. USE OF STREPTOMYCIN IN ELEVEN PATIENTS

Case	Streptomycin Concentrations Units Per c.c.		Streptomycin Dose and Route Units x 1000 q 24 hrs.			MEC <sup>5</sup> Units Per c.c.
	Blood <sup>1</sup>	Spinal Fluid <sup>2</sup>	IM <sup>3</sup>		IT <sup>4</sup>	
1.	8.9—30.6	9.1—20.4	C.D.	20 per lb.	50	2.7
2.	5.1—10.1	—	q3h	20 per lb.	25	2.6
3.	4.2—8.5	11.5—5.1	q3h	20 per lb.	25	4.9
4.	10.1—19.1	11.8—20.0	q3h	20 per lb.	25	1.6
5.	6.2—14.6	6.2—6.0	q3h	20 per lb.	50	2.8
6.	5.5—14.5	5.0—28.0	q3h	20 per lb.	25	2.8
7.	3.3—6.5	8.5—	q3h	20 per lb.	25	4.4
8.	7.3—22.0	4.9—16.3	q3h	20 per lb.	30	7.5
10.	5.8—12.2	5.1—12.1	C.D.	20 per lb.	50	2.5
11.	9.3—10.5	9.3—9.6	q3h	20 per lb.	25	1.6
12.	7.5—9.8	11.1—	q3h	20 per lb.	25	4.4

<sup>1</sup>Specimen collected daily at irregular intervals when intramuscular dose was given by continuous intramuscular drip (C.D.). When streptomycin was given every three hours (q3h) the blood was withdrawn three hours after the last dose.

<sup>2</sup>Spinal fluid concentrations represent those found twenty-four hours after intrathecal dose listed.

<sup>3</sup>IM—Intramuscular.

<sup>4</sup>IT—Intrathecal.

<sup>5</sup>MEC—Minimal effective concentration of streptomycin necessary to completely prevent growth on Levinthal agar in forty-eight hours.

units per c.c.) proved to be equally resistant in mice. Doses as high as 5,000 units per mouse failed to protect 50 per cent of the mice.

Despite the agreement between the *in vitro* and *in vivo* tests, neither method enabled us to select in advance the patients whose strains became resistant after the beginning of streptomycin treatment. Our therapeutic results suggest that it is the severity of infection, and therefore presumably the size of the bacterial population, which determines whether the strain from a given patient will exhibit resistance. This is in line with the view held by most authorities that large populations of all strains, demonstrated as sensitive by ordinary *in vitro* tests, contain a small number of resistant organisms.

While these procedures fail to detect traits of resistance in the original strains, their use in determining the sensitivity of organisms cultivated from patients after the start of streptomycin treatment has provided a clear indication of the efficacy of this antibiotic in the patients from whom the strains were isolated. In the group of patients in whom streptomycin treatment proved successful, all strains isolated from spinal fluid or from the respiratory tract after the beginning of treatment were shown to be sensitive. On the other hand, treatment was unsuccessful in two patients whose strains exhibited marked resistance during streptomycin administration.

Twenty-five patients have received streptomycin either alone or in conjunction with other agents. The daily intramuscular dose, given either by continuous intramuscular drip or divided into eight doses injected every three hours, was equivalent to 20,000 units per pound body weight. All pa-

tients received daily intrathecal injections in 25,000 to 50,000 units quantities. The duration of treatment was only five days for most patients. This period appears to be adequate for all. The occurrence of eighth nerve deafness in a significant number of patients treated for periods longer than one week makes it a serious responsibility to determine and to use the shortest period of treatment which is effective. Table III lists, for each patient of the eleven studied, the variations of streptomycin in the blood and spinal fluids, and, for comparison, the MEC of the individual strains.

The results of treatment of the twenty-five patients receiving streptomycin alone or in conjunction with other agents are summarized in Table IV. Each patient is classified according to the severity of his infection and the therapeutic agent or agents used. Severity of infection was judged by two standards, clinical signs and the concentration of sugar in the original spinal fluid. In the cases of mild or average severity, the level was above 30 mg. per cent in all but one patient, whose value was 24. In the severe group, whether the infection was in chronic, or early stage, the concentration of sugar in spinal fluid before treatment with streptomycin was 15 mg. per cent or below. The patients are divided into four groups according to the therapy received: streptomycin alone; streptomycin alone for four days, at which time type-specific antiserum and sulfadiazine were added; the four who received streptomycin after unsuccessful treatment with type-specific antiserum and sulfadiazine; and those treated with all three agents initially. The result of treatment is recorded under *R* for complete recovery, *S* for those who survived but who exhibited serious cerebral injury and *D*

## H. INFLUENZAE MENINGITIS—ALEXANDER

TABLE IV. SUMMARY OF TREATMENT OF TWENTY-FIVE PATIENTS

No. Patients Treated	Severity of Infection	S.M. <sup>1</sup> Alone			Serum After 4 Days of S.M.			S.M. After Unsuccessful Serum and Sulfa			S.M., Serum, Sulfa Initially		
		R <sup>2</sup>	S <sup>2</sup>	D <sup>2</sup>	R	S	D	R	S	D	R	S	D
13	Mild or average	12						1					
8	Severe chronic			2		2		1	1	1			
4	Severe early				1						1		3
Total Cases: R—19 S—3 D—3													

<sup>1</sup>S.M.—Streptomycin.

<sup>2</sup>R—Recovered. S—Survived. D—Died.

for those who died. All of these twenty-five patients had received sulfadiazine at home or in other hospitals before institution of streptomycin therapy, with one exception, No. 12, in whom the antibiotic was unsuccessful. It can be seen that when the infection is of mild or moderate severity, streptomycin alone brings about complete recovery. While, on the whole, clinical improvement was less rapid than that seen following serum treatment, the changes in the spinal fluid, indicating clearing of infection, appeared just as promptly as those seen following serum therapy. In nine of the twelve patients who recovered, the spinal fluid cultures proved sterile twenty-four hours after initiation of streptomycin therapy; in the other three, after forty-eight hours. The return to normal of the chemical constituents of the spinal fluid was equally rapid. When the disease is severe and other therapeutic agents are not used to supplement streptomycin until after four days or longer, the results are very disappointing. Four patients received streptomycin for the first time after unsuccessful serum and sulfadiazine treatment in other institutions. All but one were adequately treated. Of these, one died, one survived but showed serious mental deterioration, and two recovered completely. In this group of patients with severe infections, the disappointing results of treatment with the two forms of therapy used separately led us for a period to adopt the policy of administering all three agents initially: streptomycin, type-specific antiserum, and sulfadiazine. Four patients with severe infections have been treated according to this plan; all four recovered and appear to be normal in physical and mental development, but since two were under six months of age at the time of their illness, a longer period of observation is necessary. There is reason to believe from our recent experimental evidence that sulfadiazine in conjunction with streptomycin will prove successful in a portion of the severe cases. Criteria for selection are being explored.

TABLE V. SUMMARY OF PROTECTIVE POWER OF THERAPEUTIC AGENTS IN MICE

Therapeutic Agent	Protection	
	No. of MLD*	No. of Mice
Sulfanilamide	500	120
Sulfadiazine	9,250	280
Serum	28,875	625
Sulfadiazine and Serum	850,000	270
Streptomycin	100,000,000	200

\*MLD—Minimum lethal dose.

In two of the five patients with severe forms of the disease, treated with streptomycin alone for four days or longer, the failure of the antibiotic to eradicate the infection was proved to be due to emergence of resistance of their strains. In two large subarachnoid abscesses were found at autopsy; the strains isolated from these were not tested for sensitivity.

The use of streptomycin alone in other severe H. Influenzae infections is too limited to assess its value, but an example of emergence of resistance of strain has already been encountered during treatment of a patient with epiglottitis.

Thus it seems clear that the sulfonamides, rabbit antiserum and streptomycin are all effective agents when used alone under certain circumstances. On the other hand, each has limitations when used alone in the severe infections. An objective basis for comparison of their separate and combined antibacterial effect has been provided by the results of mouse protection tests shown in Table V. Serum alone was not shown to be significantly better than sulfadiazine, the best of the sulfonamides tried; but when the two were used in conjunction, their augmented protective power suggested a synergistic action. Streptomycin alone has never failed in many tests to protect against 1,000,000 minimum lethal doses (M.L.D.) when a single dose, equivalent to 1,000 to 5,000 units per kilogram body weight, was injected intraperitoneally. A single dose as low as 20,000 units per kilogram, either by intramuscular or intraperitoneal route,



has regularly protected against 100,000,000 M.L.D. Preliminary results suggest that the addition of sulfadiazine will enhance this protection; a significant increase in antibacterial effect has been demonstrated *in vitro*.

### Conclusions

Streptomycin is the most effective single antibacterial agent against *H. influenzae*. Since it is bactericidal, its action is rapid and effective against large bacterial populations, both *in vivo* and *in vitro*. Nonetheless, streptomycin, like all other single therapeutic agents, is limited if the infection is of sufficient severity; emergence of resistance of the organisms is clearly the chief cause of failures. Experimental evidence and response in one patient suggest that this defect may be overcome if sulfadiazine is used in conjunction; the two agents have different modes of action and, therefore, organisms resistant to one can be expected to be sensitive to the other. Whether in some patients specific antiserum is needed, in addition, to neutralize the products of *H. influenzae* which produce irreversible cerebral injury, cannot be answered from the limited experience. However, there is suggestive evidence that the incidence of residual cerebral damage is less when all three therapeutic agents are used together initially, rather than in sequence after a trial of each separately. Additional limitations are imposed by its toxic manifestations. Administration of this antibiotic for weeks in resistant forms of meningitis is to be condemned. Eighth nerve deafness, in some instances apparently permanent, has occurred in a significant number of patients as a result of streptomycin injury, when continued for periods longer than one week. A much higher percentage of patients exhibit vestibular dysfunction. For the present, except in those institutions equipped to study their separate actions, all three antibacterial agents are indicated simultaneously when the meningeal infection is severe, as judged by the criteria described.



*Little Joe Genius says—*

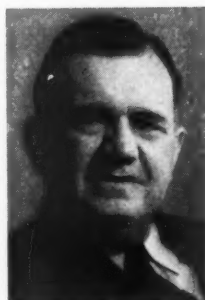
I see that Senator Murray is satisfied with the care given him by the Navy dispensary in Washington. He should be, being as you and I pay for it.

*Little Joe Genius says—*

I see that Dr. Goin of California had a date with Senator Murray, and proved a tough nut for Murray to crack. Read the record.

## Results from the Treatment of Peptic Ulcer

By T. Grier Miller, M.D.  
Philadelphia, Pennsylvania



THE EFFICACY OF any form of therapy is manifested in the ultimate results that follow its exhibition. In some instances, as in the more acute infections, the relation between the therapeutic procedure and the subsequent course of the disease process may be quite obvious. In other instances one is left in doubt as to the influence of the adopted treatment. This is particularly true when other patients with a similar affection recover in an equally satisfactory fashion without having had any particular medical supervision or after some entirely different type of management.

Peptic ulcer has a notorious tendency to heal naturally. This is proved by the frequency of gastric and duodenal ulcer scars at autopsy in patients who never had ulcer symptoms and so were never treated for such a lesion; also, by the clinical observation that many ulcer patients, when they first consult a physician, give a history indicative of repeated previous attacks of similar nature that subsided without any therapy or change in habits of life. Thus when an ulcer heals under observation and following the adoption of some specific type of therapy, one often wonders if it would not have done equally well without any treatment.

Furthermore, the follow-up data on peptic ulcer cases are always questionable because (1) the lesion has a tendency to alternating periods of activity and quiescence, and the physician often is unduly influenced by the patient's condition at the time of the interview; (2) in most instances the decision as to the degree of activity of the lesion depends on subjective observations by the patient, and the symptoms may be suggestive of a recurrence of activity when only a functional disturbance has occurred; (3) radiological observations,

Further, the follow-up data on peptic ulcer cases are always questionable because (1) the lesion has a tendency to alternating periods of activity and quiescence, and the physician often is unduly influenced by the patient's condition at the time of the interview; (2) in most instances the decision as to the degree of activity of the lesion depends on subjective observations by the patient, and the symptoms may be suggestive of a recurrence of activity when only a functional disturbance has occurred; (3) radiological observations,

From the Gastrointestinal Section (Kinsey-Thomas Foundation) of the Medical Clinic, Hospital of the University of Pennsylvania. Presented at the eighty-first annual session of the Michigan State Medical Society, Detroit, September 27, 1946.

even when obtainable, are sometimes misleading, as when a defect is due to an old ulcer scar or when disturbed function is due to some extra-gastrointestinal lesion, and (4) the patients who have done well are more difficult to follow either by personal interview or letter than those who have persistent or recurrent symptoms. Thus the results of a follow-up study usually are more unfavorable than the actual conditions justify.

In spite of these qualifications on the accuracy and significance of a follow-up study of peptic ulcer, something is gained, at least for the analyst, by a summarization of such data as he can obtain on a large series of personally observed cases. I trust that a review of some of our observations on patients with this disease may also be helpful to others.

Peptic ulcer, like gall-bladder disease, accounts for about one third of the patients who consult the physician for indigestion, and consequently he, like every gastroenterologist, has an opportunity to try out his ideas as to therapy on a large group of cases. In spite of the extensive experience thus acquired by practitioners, no standardized management for simple ulcer and for its complications has as yet been established. I need not refer to the many forms of treatment that have been advocated and that are in current use. Our own, for the simple, uncomplicated case, has not been entirely uniform, but in the main it has been of a very conservative nature. Having established the diagnosis by history and roentgenological examination, we have never felt it necessary to hospitalize the ordinary ulcer patient without at least giving him a trial on an ambulatory basis. On the other hand, when the ulcer has proved refractory to such management or when a complication has been demonstrated, we have promptly hospitalized the case. In the instance of gastric ulcer, we have been more ready to seek hospitalization because of the possibility of malignancy and because of the importance of eliminating such a lesion.

We have believed that the gastric acidity is an important factor in the production and maintenance of ulcer, but have not felt that complete neutralization is necessary for healing, since it would be an unusually phenomenon in nature to require that a normally physiologic state be radically altered in order to bring about recovery from a diseased condition. We have therefore depended largely on food, frequently administered and properly selected, to reduce such acidity as might

exist. After all, eating is the natural response to the chief symptom, that of hunger, and doubtless is the basis of the healing that so frequently occurs in the untreated patient. Our routine has been to give six feedings a day and to permit almost any simple bland food, even meats after the first week or two, eliminating only the more acid foods and others that might be mechanically or chemically irritating to the lesion. Feeling that healing is aided by good nutrition, we have insisted upon a high-caloric and well-balanced diet. We have largely avoided alkalis, but in some cases have given a combination of magnesium trisilicate and aluminum hydroxide when food alone did not entirely control the discomfort; this has rarely been necessary in the simple case for more than a few days. Sedatives we have not hesitated to use in the nervous, overwrought person, and commonly we have given some ascorbic acid because of the limitation of raw fruits.

We have given considerable attention to the patient's emotional problems, finding them very common, and in some instances have sought the aid of a psychiatrist. Always we have insisted on such adjustments in domestic and business relationships as were possible, reasonable physical and mental relaxation and a calm, philosophical attitude toward life in general. This, we are convinced, has been most helpful in many cases.

When on such a basis of therapy the patient's discomfort has not promptly subsided, or subsequent radiological examination has revealed evidence of persistent ulcer activity, we have insisted on a short period of complete physical and mental rest, preferably in a hospital. If still, after a reasonable time, no relief has been obtained, or if, in the case of a gastric lesion, the ulcer defect has not decreased in size, we have insisted on surgical interference. For the gastric ulcer case this is especially urgent, because of the possibility that the lesion is malignant; for the refractory ulcer case, whether gastric or duodenal, it is indicated also because of the slight possibility that otherwise he will ever become permanently well. In addition, we have, of course, promptly subjected to operation all patients with a perforation and eventually many with pyloric stenosis or hemorrhage.

With these qualifying remarks, I shall now refer, in the first place, to our results from the medical and the surgical management of the total group that we were able to follow and, secondly, to the results that we have obtained, by a medical pro-

gram, in a subgroup of cases with gastric hemorrhage.

#### Data from Fifteen-year Experience

During the past few years, various members of my staff have assisted me in an attempt to secure accurate data on the present condition of the 1,433 patients who over the fifteen-year period of 1930 to 1944 have been admitted to our clinic or to my private office because of peptic ulcer. In every instance, the diagnosis was established not only by the history and by physical observations, but also by radiological investigation. In some instances, the patient could not be interviewed and we have had to accept data supplied by him or his physician in response to a questionnaire. When he could not be reached in one of these ways, we have accepted the data recorded on his last visit to the hospital or office and so have placed him in the group having a follow-up only for the years between his original admission and his last visit. Thus, some persons admitted ten or more years ago have been placed only in the one, three or five-year follow-up group.

In the instance of patients operated upon for peptic ulcer, no matter whether previously under our observation or not, we have regarded them as failures on whatever therapy had been instituted before that time and have initiated our follow-up observations with the date of operation. Thus, a patient under observation for ten years, but operated upon after five to seven years, is listed only in our 1+ and 3+ year follow-up group. He is regarded as a failure on his preoperative therapy, but included for information on the results of his operation.

When a patient has died of his ulcer or a complication, without operation, he has been listed as "not improved" by medical therapy; when he has died following operation and before discharge from the hospital, he has been listed as a post-operative death. When he has died later of some cause other than his ulcer or a complication, we have classified him solely on the basis of his subsequent ulcer symptoms, as "asymptomatic," "improved" or "not improved."

In many instances, the so-called "improved" cases are virtual cures, but when they have had any digestive disturbance, even occasionally, that we have thought might have resulted from reactivation of their ulcer or from some complication, we have not put them in this class. It would

seem fair, therefore, to regard both the asymptomatic and the improved cases as having obtained highly favorable results. On the other hand, when any evidence, either historical or roentgenological, has indicated the presence of continued or intermittent ulcer activity, we have classified the case as "not improved." Many of these have not been incapacitated individuals or obvious candidates for surgical interference; some have been at their work regularly and have had long intervals of complete freedom from symptoms. Seen at other times, some of them might have been regarded as cured.

It is necessary to say also that perhaps in some instances we have failed to find the patient, especially in the older age groups and in our earlier cases, because he had died, but at the same time we know that some have failed to respond to our request for an interview because they are no longer sick or have moved to some other locality.

Of the total number, 1,074 were treated only medically and 359 surgically. Of the medically treated group, only 59 per cent could be followed, whereas 81 per cent of the patients operated upon were followed for one or more years. Thus, our results in reference to the surgical cases are of greater significance. Furthermore, it must constantly be borne in mind that data such as we are presenting on hospital cases by no means indicate the real incidence of the disease, since many patients recover without any therapy, others as a result of simple treatment, self-administered or under the supervision of the family physician.

In any event, we have secured follow-up data on 923 of the 1,433 cases (64.4 per cent) for one or more years; on 627 of them for three years or more; on 444, for five years or more; and on 166, for ten to fifteen years (Fig. 1). Of the total number, 291 (31.5 per cent) have been subjected to some sort of an operation for their ulcer. These we have regarded as having failed to secure relief on a medical basis, though it is certain that some of them had never been given a fair trial, some had been unco-operative, and some from the beginning had complications that could not be properly managed medically. In addition, there were 122 other patients (19.3 per cent) who did poorly on the medical program that we had instituted, thus, with the patients operated upon, making a total of 44 per cent that may be regarded as having failed to improve on a medical basis.

The ultimate outlook for the 122 unimproved patients still on a medical regimen is uncertain,



# PEPTIC ULCER—MILLER

but of the 291 patients operated upon 54.6 per cent have been cured and another 23.4 per cent improved. Thus, of the total 923 patients, 78 per

50.9 per cent; and for ten or more years, 70 and 61.5 per cent.

Our data do not lend support to such a de-

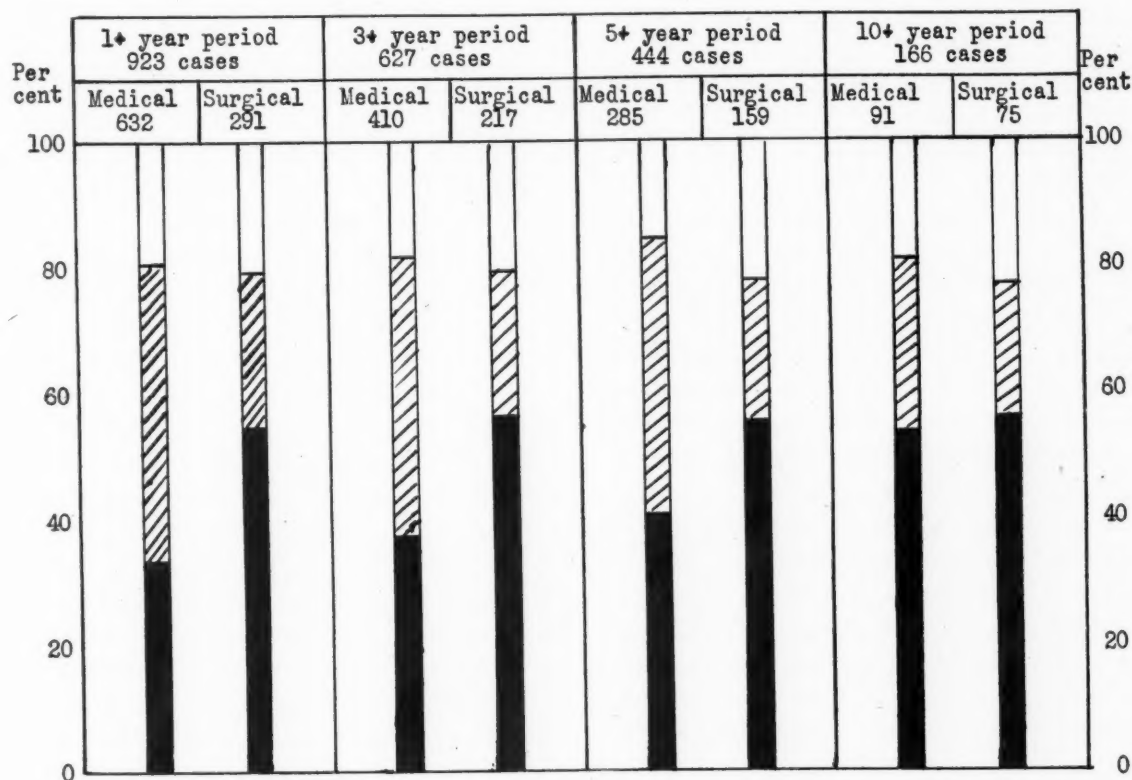


Fig. 1. Follow-up results from medical and surgical therapy in peptic ulcer. Solid portion of each column represents percentage of asymptomatic cases; lined portion, improved cases; open portion, non-improved cases.

cent may now be looked upon as cured or markedly improved.

Let us similarly analyze the 3+ year group of 627 patients. Of these, 217, most of them having failed to respond satisfactorily to a medical program, came to operation; but of these 217 patients, 79.7 per cent are now asymptomatic or greatly relieved, and of the 410 medical, non-operated-upon cases, 82 per cent are in those favorable groups. Thus, of the 627 patients, after three years, only 18.7 per cent were still, at the time of their last interview, having ulcer symptoms.

It may be said that a longer period of observation would not give such favorable results. Indeed, Heuer,<sup>1</sup> in a review of the literature on the results of surgery in peptic ulcer cases, found that for a one- to five-year follow-up period satisfactory results were obtained from gastric resection in 84.9 per cent; from gastroenterostomy in 77.3 per cent. For a five- to ten-year period, however, he found the corresponding figures to be 79.4 per cent and

crease in satisfactory results with a longer period of observation, either after surgical or medical therapy. Thus, for our group followed five years or more (444 cases), of the 159 operated upon, 78 per cent had satisfactory results, and of the 285 treated medically, 84.6 per cent. Furthermore, for the 166 cases observed over a ten- to fifteen-year period, 77.3 per cent of the surgical cases and 81.4 of the medical ones had good results. For the 166 cases, a favorable result was obtained in approximately 80 per cent.

How can one explain this situation? Do we not constantly see recurrences after years of inactivity? We do, but also we see patients who have had symptoms for several years eventually recover completely. Thus, the two conditions tend to balance one another.

## Results from Gastric Resection

We shall at some other time present a detailed analysis of the results from the various types of operation performed in our total series. It is now generally admitted, however, that gastric resec-

TABLE I. RESULTS FROM GASTRIC RESECTION IN 113 CASES OF PEPTIC ULCER

Location of Ulcer	Total Number	Cured (Per Cent)	Improved (Per Cent)	Not Improved (Per Cent)	Died (Per Cent)
Gastric	24	95.8	4.2	0	0
Duodenal	73	79.4	13.7	4.1	2.7
Gastric and Duodenal	10	70.0	0	30.	0
Gastrojejunal	6	33.3	0	50.	16.6
Total	113	79.5	9.7	7.9	2.7

tion gives the most satisfactory results, and that is our experience. At this time I shall refer only to the cases so treated and only for the period of 1938 to 1945, already reported separately by Miller and Nicholson.<sup>2</sup> During that time, except in special instances, this operation has been the routine procedure of our surgeons for refractory and complicated ulcer. It was accomplished on 113 cases (Table I) that could be followed (twenty-four with a gastric, seventy-three with a duodenal, ten with both a gastric and a duodenal, and six with a gastrojejunal lesion). Of these, three have died—one duodenal case on the fourth postoperative day from peritonitis secondary to preoperative perforation, another duodenal case after twelve months from gastric hemorrhage, and a gastrojejunal case after twenty-one months from hemorrhage incident to a secondary marginal ulcer. Of the twenty-four gastric ulcer cases, 95.8 per cent are now regarded as entirely cured and the others are improved. Of the seventy-three duodenal cases, including the two that died, 79.4 per cent are regarded as entirely well and another 13.7 per cent as improved, thus giving a favorable result in 93.1 per cent. When both a gastric and a duodenal lesion were present, a favorable outcome was less common (70 per cent), and of the six gastrojejunal cases, only two did well. If the gastrojejunal cases are excluded, thus limiting the group to primary resections, a good result was obtained in 92.6 per cent; if, in addition, the one postoperative death is eliminated, the percentage is 93.4.

We have been particularly interested in the twelve unimproved cases (including those that died). We found that six of them had a half or less of the stomach removed, that six did not have the ulcer itself removed, that five had had previous gastric surgery, and that four were highly psychoneurotic, two of them being alcoholic and un-co-operative. These, we believe, are unfavor-

able factors that deserve serious consideration when any operative procedure on the stomach is contemplated. Often the operation must be done anyway, but under such circumstances it must always be appreciated that the prognosis is very guarded.

### Gastric Hemorrhage

Finally, I wish to refer to our results from gastric hemorrhage, which is the outstanding complication that requires medical therapy. Since 1938, we have treated all such cases by prompt and frequent feeding, even in the midst of the bleeding. In 1941, Nicholson and I<sup>3</sup> made a report on our first thirty-two cases so managed; in 1943, Rasberry and I,<sup>4</sup> on an additional forty-three, and now our series has risen to 125. We have not put these patients on a full diet, including ground meats, as originally outlined by Meuhlengracht, but we have included from the beginning, milk, eggs, cereals, gelatin preparations, pureed vegetables and cooked fruits. Often, a few days later, after the cessation of the hemorrhage we have added meats. Only rarely have we used any alkalis and never opiates, but we have used sedatives, such as the barbiturates, rather freely. Fluids by mouth have not been restricted, and transfusions have been given as demanded by the degree of anemia.

The severity of the hemorrhage in our cases has varied, but in the majority the hemoglobin was reduced to less than 50 per cent, frequently to from 20 to 30 per cent. All bleeding cases admitted, even those almost moribund, have been included in the series. In most of the cases the bleeding stopped promptly and it was possible then to secure satisfactory roentgenological study before deciding about subsequent therapy. Ordinarily no surgical interference was permitted until a week or more had elapsed after the cessation of bleeding. In three instances, however, while still uncertain as to whether or not the bleeding had stopped, we advised surgery. In two of these it was found at operation that, as a matter of fact, the ulcer had ceased to bleed, no blood being found in the stomach or small intestine.

These cases are of particular interest. One patient, a man of forty-seven, a high-strung, extraverted salesman, came to our clinic with epigastric pain of such severity that at first perforation was suspected. After a week he vomited blood, and within a few more days, in spite of transfusions, his hemoglobin got down to 22 per cent. All this

time we were feeding him, and, because he was highly emotional, we were giving him rather large doses of sodium luminal. Finally he became stuporous, and nourishment had to be given by tube. The stupor at first was thought to be due to cerebral anoxia. Nystagmus, however, was noted by one of our psychiatrists, who suggested on that basis that his mental condition might be a phenobarbital reaction. Amytal was substituted and the amount of sedation reduced. His mind cleared, and again he took his feedings by mouth, but he continued to bleed. After about two weeks, when the bleeding seemed to have ceased, we were about to have him operated upon, but again he vomited clots of blood. A week later, however, though he was still passing tarry stools, one of our surgeons found no blood in the stomach or duodenum, but did discover a deeply penetrating posterior-wall duodenal ulcer that obviously was healing. He was able to do a gastric resection. The patient left the hospital after another two weeks, quite well.

Another patient, seen quite early in our experience with the Meuhlengracht regimen, continued to have bloody stools for a week and then was operated upon. His ulcer also had stopped bleeding, and we could easily and with greater safety have waited longer for the operation. He also, however, made a prompt recovery.

A third patient was operated upon while still bleeding because he was an older man, had a gastric lesion, and we feared that it was malignant and would never respond to a medical program. As a matter of fact, he had only a benign ulcer, but he died on the operating table.

These cases lead us to the opinion that one should not become discouraged with the prompt and frequent feeding program because the bleeding does not stop at once. If one will only give sufficient blood to prevent severe anemia and at the same time maintain the nutrition, he can in the usual case wait indefinitely before resorting to surgical interference. To do so greatly reduces the hazard of operation.

Of our 125 cases, five have died but only one from exsanguination (Table II). The death that followed operation cannot be attributed to the medical program and might have been prevented had we not abandoned the more conservative regimen. One patient was moribund on admission and received no feedings, one died of coronary occlusion, and one of a perforated ulcer. Thus we have had a gross mortality of 4 per cent, but a net mor-

TABLE II. DATA ON PERSONALLY OBSERVED CASES OF BLEEDING PEPTIC ULCER TREATED BY PROMPT AND FREQUENT FEEDING

Cases Reported	Number of Cases		Deaths			
	Gross	Net	Number		Per Cent	
			Gross	Net	Gross	Net
1-32, Reported 1941	32	31	1	0	3.1	0
33-75, Reported 1943	43	41	3	1	7.	2.4
76-100, Reported 1944	25	25	0	0	0	0
101-125, This report	25	24	1	0	4.	0
Total series	125	121	5	1	4.	.8

tality of less than 1 per cent. Even the gross mortality is less than a half of that which Elsom and I found reported for almost 6,000 cases treated by the older starvation and immobilization regimen.

### Summary

Thus, I have outlined very briefly our results from the medical and surgical management of peptic ulcer. It is not only a common but a serious disease, as indicated by the fact that only 56 per cent of the cases we could follow for one to fifteen years were cured or definitely improved on medical therapy. Fortunately, however, with the help of surgery, four out of every five have been relieved. Furthermore, of the cases submitted to gastric resection, the most approved surgical procedure, more than nine out of ten are cured or greatly relieved. At the same time, operation is indicated only in those cases refractory to a medical program, in those with perforation or permanent organic stenosis of the pylorus, in those gastric cases in which malignancy is regarded as a possibility, and in certain cases after hemorrhage has occurred. In only the rarest instance, however, in my opinion, is operation justified in the midst of hemorrhage unless it is complicated by perforation.

### References

1. Heuer, G. J.: The Treatment of Peptic Ulcer. Philadelphia: J. B. Lippincott Company, 1944.
2. Miller, T. G., and Nicholson, J. T. L.: Results from subtotal gastric resection in peptic ulcer: the internist's viewpoint. *Am. J. Med.*, 1:476, 1946.
3. Nicholson, J. T. L., and Miller, T. G.: The prompt-feeding program for bleeding gastric and duodenal ulcer. *Am. J. Digest. Dis.*, 8:446, 1941.
4. Rasberry, E. A., and Miller, T. G.: The prompt-feeding program for bleeding gastric and duodenal ulcer. *Gastroenterology*, 1:911, 1943.

MSMS

*Little Joe Genius says—*

I see where Michigan started something again when the Michigan Health Council was formed. A recent bulletin from the AMA Council on Medical Service says there are nineteen states which have state health councils. Let's finish the job, and carry out Dr. Brunk's idea on the national scope.



# Acute Glomerulonephritis

By Francis D. Murphy, M.D.  
Milwaukee, Wisconsin



WHILE IT IS NOT unanimously believed that chronic glomerulonephritis evolves from an unhealed acute attack, this is a widely held opinion. During the past ten years observations made by investigators have revealed a close relationship between the acute phase and the chronic

form, and there is sufficient evidence to substantiate the assumption that chronic glomerulonephritis is a remote consequence of acute nephritis which has failed to heal completely. If the classic textbook picture of hematuria, albuminuria, hypertension, and edema is considered essential for diagnosis of acute nephritis, then many milder forms will pass unrecognized; and not until years later, when chronic nephritis has set in, will the true significance of the mild early episodes become apparent. The absence of a history of an acute attack in many cases of chronic nephritis may be explained to some extent by the fact that during the acute phase the classic picture was lacking. A stumbling block in the proper appraisal of acute nephritis has been the limited view taken of the cause and pathogenesis by many observers.

In recent times, the concept of acute nephritis has changed. It has been emphasized that many mild subclinical forms may exist, pass undiagnosed and untreated, and progress insidiously into the chronic stage before it is realized that the kidneys have become irreparably damaged. This concept was confirmed and extended recently by the histological examinations of Bell,<sup>2</sup> who stated that there are innumerable transitions between subclinical glomerulitis and clinical acute nephritis. Fundamentally the same type of reaction occurs in the two forms; the difference exists only in the intensity of the disease. This better understanding of the clinical and histological features of acute ne-

phritis removes one of the main obstacles which has retarded progress in this field.

## The Latent Period

Acute glomerulonephritis may follow one of several courses: (1) Patients may die in the acute attack; (2) subacute or chronic nephritis may develop; and (3) complete healing may occur, or slight albuminuria with no foreign elements in the urinary sediment may persist for years. This last-mentioned type of development was pointed out by Addis<sup>1</sup> as an example of healing with defect. Most patients with acute nephritis recover within a period of six weeks. In some cases healing appears to be complete when in reality the inflammation of the kidney has only become less intense, and the patient is dismissed from further observation with the idea that he is well. He may be oblivious of the fact that his kidneys are damaged until years later when evidence of permanent injury appears. It is, therefore, most important to determine whether or not the renal lesion has healed before dismissing a nephritic patient from treatment. After the severity of the acute phase has passed, there is a period of transition during which recovery may occur or the disease may become chronic. Routine tests such as the phenol-sulfonphtalein test, analysis of the blood for retaining nitrogen, and determinations of blood pressure may lead one to believe the lesions are healing satisfactorily, but more exhaustive examination may prove this is not the case. If the physician recognizes that healing is incomplete, he may guard the patient more carefully and make greater efforts to treat him, thus avoiding unnecessary chronic nephritis.

The importance of the latent or the transitional period is becoming better established. As has been pointed out, when the acute episode is over, whether it was mild, moderate or severe, there is a variable of two months to two years when some patients appear well; however, careful examination of the urine will show evidence of a residual lesion in the kidney. This latent period is characterized by complete absence of clinical evidence of nephritis, by albuminuria, and by an excessive number of red and white blood cells and granular casts in the urine. During this most important phase of the disease, the patient's ultimate fate is determined. Lack of proper consideration of this period is responsible for some of the conflicting views of acute nephritis. In the period of transi-

Presented at the eighty-first annual session of the Michigan State Medical Society, Detroit, Michigan, September 26, 1946.

Dr. Murphy is director of the Department of Medicine and professor of medicine, Marquette University School of Medicine, Milwaukee, Wisconsin.

tion the kidney may gradually heal completely or the disease may progress into chronic nephritis. It may be difficult to say when the latent period ends and chronic nephritis begins, since the latent period may merge gradually with the chronic form; but usually after two years of the previous disease it may be classed as a chronic nephritis.

Not until recently have methods been devised to determine the presence of a minimal unhealed lesion in the kidney. Before the method of Addis was employed and prior to the use of such tests as the sedimentation rate of the erythrocytes and blood urea clearance, the presence of a latent nephritis was largely overlooked. In the latent or transitional period, when the patient appears normal and apparently cured, the key to the correlation between acute and chronic nephritis is found. In the last ten years, the number of after-studies of patients with acute nephritis has grown steadily. These observations are responsible for the modern concept of acute nephritis: Not all classical symptoms of hematuria, edema, hypertension, and albuminuria are required to make a diagnosis of acute nephritis. Milder forms are being recognized and treated adequately in an increasing number of cases. Simple methods have been devised which aid greatly in determining whether renal lesions have healed or remain active after the acute phase is supposedly over.

### Prognosis

In reports dealing with the ultimate prognosis of acute nephritis, great divergence of opinion is shown. Some authors have reported that complete recovery is the usual course, with chronic glomerulonephritis following only rarely, while others have expressed the belief that chronic glomerulonephritis is a fairly common consequence found in later years. How statistics may vary in this regard is shown by Snoke<sup>10</sup> in a follow-up study comparing prognosis in a series of cases at Stanford University School of Medicine with that in a series at the University of Rochester School of Medicine and Dentistry.

My own interest in this phase of acute nephritis was responsible for an analysis of over 200 patients with acute nephritis studied in the initial stages at the Milwaukee County Hospital.<sup>8</sup> These patients were kept under observation from two to fifteen years after the onset of the acute phase. The series included both adults and children who were studied in the hospital for three months to a

year and who were observed at fairly regular intervals at an outpatient department during the years following. In this series, 25 per cent of our patients became chronic and 12.6 per cent died in the acute phase or soon after. Seventeen per cent, although clinically cured at the time of discharge, did not return for re-examination, and we assumed their recovery was permanent. Of the patients who died in the acute stage and those whose disease became chronic within a year, as well as those who did not return for re-examination, there were eighty-nine whose follow-up study was the chief topic of a paper formerly written;<sup>7</sup> 34.1 per cent recovered and remained healed on re-examination; 9.2 per cent were found to be latent on re-examination.

Rigid adherence to rules of treatments in this period may accelerate complete recovery while laxity may retard healing. It is difficult to determine whether the renal lesion is healing or is becoming chronic. The tests of renal function usually employed are insufficient for this purpose. Determination of the degree of activity of the lesion in the kidney is essential, and repeated examinations are necessary to observe whether healing or inflammation is assuming the ascendancy. Several methods have been used to obtain this information, and we believe that a combination of the results of these tests forms a better prognostic guide than the results of any one test taken alone. To learn which course the disease is taking in a given case requires more than a single examination. We employ the following methods in most of our cases, and while not all of the tests are of uniform importance, we believe that all are good prognostic guides.

Prognosis of acute glomerulonephritis is determined by a combination of clinical and laboratory examinations:

1. From the clinical standpoint, the blood pressure is probably the most important symptom for a prognosis. If hypertension exists, the prognosis is bad; if there is no hypertension, the prognosis may be unfavorable, but the chances of improvement and of complete cure are much better.
2. A study of the urinary sediment, degree of anemia, amount of plasma, protein, and the dilution concentration tests of Volhard is of considerable value, and the blood urea clearance test and the sedimentation rate of the erythrocytes are of particular help. The count of casts and cells in the urinary sediment by Addis' method is considered the greatest aid of all. This test, if done

at regular intervals, gives one a fairly good idea concerning the nature of the disorder.

3. A study of the ability to concentrate urine (Volhard's method) is quite reliable. Progressive impairment of concentration points to a progressive unhealed lesion. Doctor Van Slyke told me this is the most delicate test of all for prognostic purposes.

4. Urea clearance test is very helpful. When the urea clearance is low early and improved later in the course of the disease, the outlook for the patient is good, but when repeated examinations show a tendency towards a drop in percentage, the outlook is unfavorable.

5. While not a basis for determining exactly the progress of the renal lesion, the failure of anemias to respond satisfactorily to usual therapeutic measures, such as the administration of vitamins, iron, et cetera, indicates that the renal lesion is probably becoming worse.

6. Estimations of plasma protein are important prognostic aids, even though the plasma albumin does not drop to the critical level of 2 grams per 100 c.c. of blood. A lowered plasma albumin content, e.g., 3 grams per 100 c.c., and a value for the total protein of less than 5 grams per 100 c.c. are unfavorable indications.

7. Finally, determination of the erythrocyte sedimentation rate is a valuable aid in prognosis. While it is not always accurate as a prognostic measuring stick, it nearly always is. We have employed this test for over twenty years, and we believe a rapid sedimentation rate indicates unhealed lesions becoming progressive. A slowing down of the rate indicates a subsidence of inflammation, while a normal rate points to a healed or almost completely healed kidney.

#### Treatment

It must be recognized that in acute glomerulonephritis there is a generalized vascular involvement which leads to a vasoconstriction of the kidneys and of the other essential organs of the body as well. The treatment of acute nephritis must be constructed to embrace the entire body, not only the kidneys. The hypertension which follows upon the generalized vasomotor constriction may lead to a complete anuria, to an involvement of the brain followed by convulsions, and to dilatation and failure of the heart caused by increased peripheral resistance. Certain specific measures are recommended for the acute phase of nephritis.

Digitalization is necessary because of the ever-present danger of heart failure. The use of 3 grams of magnesium sulphate dissolved in 150 c.c. of 5 per cent glucose solution may be given intravenously once or twice a day until the blood pressure is under adequate control. By this means of controlling the blood pressure, heart failure and convulsive uremia may be forestalled. Calcium gluconate, 2 grams in 50 c.c. of 5 per cent glucose, or two 10 c.c.-ampules, may be used as an antidote for the respiratory embarrassment that may follow the use of magnesium sulphate.

Treatment of acute nephritis has become fairly well standardized. Rest is valuable for the patient, particularly to promote healing of the kidney lesions, and is the first principle in the treatment of nephritis. We have compared, in the past, treatment of patients after the acute phase is over, by enforcing rest for one group and allowing another group free activity. Our results, especially in adults, emphasized the importance of keeping the patients in bed for several months after the clinical features have passed, and until the last remnants of the kidney inflammation have disappeared. Patients who were cured remained at rest until well, and patients who left the hospital before being cured fared less well eventually. Granted that prolonged enforced rest may be difficult in some cases, particularly in younger patients, it is unfortunate that the parents and even the medical advisor often fail to recognize the need of this enforced rest. As for modified bed rest for three or four months, we believe that if rigid adherence to inactivity has failed to accomplish its purpose, then chronic nephritis has probably already set in, and such rigid restriction and rest are no longer absolutely necessary. Physical inactivity serves to obtain rest for circulation in the kidney, which lessens the demand for work upon the kidney.

In addition to enforced physical inactivity, rest for the kidney may be obtained by regulation of the diet. This must not be taken to mean that the diet should be inadequate. The diet of the patient with acute nephritis may be analyzed according to proportions of protein, salt and fluid. Too much protein in the diet keeps the inflammation of the kidneys active. This may be learned from clinical experience, but particularly from experimental work of Addis,<sup>1</sup> Farr and Smadell<sup>4</sup> and Chanutin and Ferris.<sup>3</sup> They have noted that injured kidneys heal faster on a low-protein diet and



slower on a high-protein diet. However, other investigators have expressed the belief that high-protein diet is not injurious to patients with acute nephritis. Keutmann and McGann<sup>5</sup> found a high-protein diet did not retard healing, and return of renal function was accelerated. Many others have accepted a similar opinion. One must be guided by personal experience with patients to arrive at a proper conclusion. It is my idea that a diet containing 0.75 to 1 gram of protein per kilogram of body weight represents the optimal diet for the nephritic, since it fulfills protein requirements adequately and yet does not retard healing of the kidney. My associates and I<sup>6</sup> compared a high acid-ash diet and a high alkaline-ash diet in a series of cases of acute nephritis, and found that as far as healing in the early stages is concerned there appears to be little or no difference. In cases of latent nephritis, in which treatment is continued over longer periods of time, the results are about the same as those mentioned above.

When uremia is impending and fluids must be given parenterally, the kind and quantity to be used are not easy to determine. The rational procedure is based on a consideration of chemical and physiological disturbances and on the correction of them by administration of fluids. The following determinations are made: (1) The sodium and chloride levels of the blood must be known. In some cases these levels are low, requiring the administration of sodium and chloride; in others, they are elevated, calling for restriction of sodium and chloride. (2) The carbon dioxide combining-power of the blood must be known. Usually an acidosis is present, but sometimes alkalosis is found, and appropriate treatment must be given. (3) The albumin-globulin ratio of the blood must be determined. When hypoproteinemia is present, it is corrected by giving protein intravenously or orally. Knowledge obtained from these determinations is indispensable in the successful treatment of the nephritis. In most cases, the proper use of 5 and 10 per cent glucose solution, sodium chloride solution, plasma, and solutions of albumin, sodium bicarbonate, and lactate, will accomplish all that is possible. Diminution in the output of urine, which leads to retention of nitrogenous substances in the tissues and blood, is the commonest defect, and it may be corrected by intravenous administration of 1,000 c.c. of 5 or 10 per cent glucose solution. This may be repeated two or

three times a day, depending upon individual requirements.

In nephritis, **before** uremia sets in, there may be difficulty in excreting sodium chloride. Then, later, when uremia develops, there may be hypochloremia, which, if uncorrected by the judicious use of sodium chloride, may in itself cause added kidney damage. Therefore, in some instances, a solution containing both glucose and saline is administered, and in others, glucose alone. If there is an excessive loss of sodium chloride in a patient with uremia, especially if vomiting precedes coma, it is wise to give 1,000 c.c. of 5 per cent glucose in isotonic saline.

The value of sulfanilamide in the treatment of acute glomerulonephritis has not been particularly spectacular. According to Rappoport, Rubin and Waltz,<sup>9</sup> sulfanilamide has no demonstrable bad effects on renal function; it does not cause an unusual incidence of toxic phenomena in these patients. They conclude that it appears to be without influence on the course and duration of acute glomerulonephritis. They say, however, that the sulfanilamide may be beneficial in the treatment of infection in the patient with acute nephritis. This is true, as experience has shown that the causal infection may be a streptococcal sore throat, which responds to the sulfanilamide.

The place of penicillin in the treatment of acute nephritis is about the same as that of sulfonilamide. The beneficial effects, if any, come from the action of the penicillin upon the primary site of the infection which caused the nephritis.

### Bibliography

1. Addis, T.: Osmotic work of kidney and treatment of glomerulonephritis. *Tn. A. Am. Physicians*, 55:223, 1940.
2. Bell, E. T.: Early stages of glomerulonephritis. *Am. J. Path.*, 12:801, (Nov.) 1936.
3. Chanutin, A., and Ferris, E. B., Jr.: Experimental renal insufficiency produced by partial nephrectomy: I. Control diet. *Arch. Int. Med.*, 49:767, (May) 1932.
4. Farr, L. E., and Smadel, J. E.: Influence of diet on the course of nephrotoxic nephritis in rats. *Proc. Soc. Exper. Biol. & Med.*, 36:472, (May) 1937.
5. Keutmann, E. H., and McCann, W. S.: Dietary protein in hemorrhagic Bright's disease: I. Effects upon the course of the disease, with special reference to hematuria and renal function. *J. Clin. Investigation*, 11:973, (Sept.) 1932.
6. Murphy, F. D., and Peters, B. J.: The effect of acid-ash and alkaline-ash diets in the treatment of acute glomerulonephritis in children. *Am. J. M. Sc.*, 211:307, (Mar.) 1940.
7. Murphy, F. D., and Peters, B. J.: Treatment of acute nephritis, immediate results and outcome ten years later in 89 cases. *J.A.M.A.*, 118:183, (Jan. 17) 1942.
8. Murphy, F. D., and Rastetter, J. W.: Acute glomerulonephritis with special reference to the course and prognosis: A study of 150 cases. *J.A.M.A.*, 11:668, (Aug. 20) 1938.
9. Rappoport, M.; Rubin, M. I., and Waltz, A. D.: The influence of sulfanilamide therapy upon the course of acute glomerulonephritis in children. *Am. J. M. Sc.*, 211:307, (Mar.) 1946.
10. Snoke, A. W.: Prognosis in glomerulonephritis in childhood. *Am. J. Dis. Child.*, 57:1373, (June) 1939.

## Dermatitis Medicamentosa

By Francis Eugene Senear, M.D.

Chicago, Illinois



**E**RUPTIONS DUE TO DRUGS have always been a prolific source of error in dermatologic diagnosis; and the introduction in recent years of many new drugs, particularly of the synthetic variety, has led to an increased incidence of these dermatoses, and has likewise produced new types to extend

an already polymorphic clinical group, running the gamut from simple erythema to gangrene. The dermatologist has long been aware of the importance of these eruptions, but it is only in recent years, particularly since the introduction of the sulfonamides, that the interest of practitioners in other fields has been notably aroused.

Various classifications of drug eruptions have been offered, and the following list serves to emphasize the diversity of cutaneous eruptions which may result from the ingestion of drugs.

1. Eczematous
2. Urticarial
3. Erythematous
4. Vesicular and bullous
5. Erythema multiforme-like
6. Erythema nodosum-like
7. Lichen planus-like
8. Pityriasis rosea-like
9. Urticarial and angio-neurotic
10. Varicelliform and varioliform
11. Acneform
12. Ulcerative and vegetative
13. Purpuric
14. Fixed eruptions
15. Dermatitis exfoliativa
16. Pigmentations
17. Herpes zoster and herpes simplex
18. Stomatitis

It should be stressed that most of these manifestations simulate one or another of the recognized dermatological entities, and that the physician must, therefore, have the thought of drug eruption

ever in mind even when some other diagnosis of the outbreak is apparently acceptable. Most often, the eruptions resemble various types of toxic eruptions, being apparent as simple or polymorphous erythemas and urticarias.

In spite of the similarity of drug eruptions to other well recognized dermatoses, there are certain fundamental differences which, while not necessarily distinctive, may serve to point to a medicinal origin for many of these manifestations. Drug eruptions usually develop suddenly in a more or less generalized and symmetrical fashion. They usually have a more striking appearance than the eruption simulated, due to their bright color. In an acneform eruption due to iodides, for example, the base of the lesion is of a brighter red color than is the case with the usual acne lesion, while the pustular tip of the lesion is also whiter and better defined. As a rule, drug eruptions subside rather rapidly upon withdrawal of the drug, notable exceptions being those manifestations resulting from the use of iodides, bromides and arsenic. While itching is usually present, the constitutional symptoms are apt to be strikingly minimal in comparison with the extensiveness of the eruption. Involvement of the mucous membranes occurs rather commonly in these conditions, and lesions of these tissues should excite suspicion.

In some instances, the clinical picture may point toward a particular drug or group of drugs as the guilty agent, but, in general, the specific drug cannot be identified from the appearance of the eruption. Different drugs may produce the same type of eruption in the same or in different individuals, or a single drug may give rise to many dissimilar pictures in different individuals. Certain of the specialized types of eruption, such as the lichen planus-like, the pityriasis rosea-like, and the fixed variety, are due to a limited number of drugs in most instances, while the pustular, nodular and vegetative forms produced by iodides and bromides are characteristic. In such instances, the dermatologist can usually, upon clinical grounds alone, suggest the probable causative drug.

Although subject to great variations in their incubation period, these eruptions usually appear soon after the use of the drug has begun, in from a few hours to a few days. The interval between the institution of treatment with a drug and the development of dermatitis medicamentosa is usually longer with the first attack than in succeeding

Presented at the eighty-first annual session of the Michigan State Medical Society, Detroit, September 25, 1946.

outbreaks. This is due to the fact that most of these eruptions are allergic in nature and the incubation period is longer in the first attack. A notable exception to the usual early onset is met with in the case of eruptions due to bromides, for here the lesions may develop only following prolonged use of the drug and, in some instances, do not appear until some time after ingestion of the drug has been stopped.

It is surprisingly difficult to obtain a history of the ingestion of drugs in many instances, and specific and often repeated questioning is required. Many a patient will give a negative reply when asked if he take drugs of any type, only to state, in response to detailed questioning, that he takes some preparation for headache, constipation, as a "nerve medicine," as a sedative or "sleeping medicine," or as a "blood purifier" or tonic. Two instances might be cited to illustrate the need of persistence here. I saw one woman with a severe pustular acne of the face, this having developed at an age long past the usual time for acne of this type. Asked about the ingestion iodides or bromides, she strongly maintained that she took nothing but a lithia tablet occasionally. She eventually recovered after a series of treatments, only to return with a similar outbreak some two years later. Again asked about the ingestion of drugs, she readily admitted taking bromides, and stated that she had taken them off and on for some years. When reminded of her previous denial of the ingestion of bromides, she stated that she had at that time thought that they were lithia tablets because they "fizzed" when put in water.

In another instance, I was consulted by a physician who gave a history of having had repeated attacks of a bullous and erosive disorder affecting the external genitalia and buccal mucous membranes. The picture suggested the use of phenolphthalein or a synthetic sedative as a cause, but he repeatedly denied the use of any type of drug and was apparently averse to accepting the diagnosis suggested. Just as he was about to leave the office he stated again that he never took any medicines, but at this time added, "except these," as he drew from his pocket a physician's sample of a commercial laxative containing phenolphthalein.

Patients are also prone to fail to mention a drug which they have taken for some time, since they feel that this gives assurance that it could not cause trouble. There are, however, wide variations in the time required for the development of

drug sensitivity by different individuals, and in some instances several years may be required. Reactions rarely take place the first time a drug is ingested, but once the sensitivity has been acquired, the outbreaks take place from within a few minutes to twenty-four hours.

In spite of the fact that the vast majority of drug eruptions are transient and have no serious or lasting effects, they cannot always be regarded as only an inconvenience. Not infrequently they lead to prolonged incapacity and to severe illness, and occasionally a fatal outcome ensues, the latter especially if the nature of the cutaneous involvement is not recognized early and the use of the offending agent is continued.

Just as it is possible for drug eruptions to simulate various other dermatoses, so systemic reactions to drug intoxication may resemble other systemic disorders. The presence of the cutaneous reaction to a drug may serve as a clue to the determination of the medicinal origin of jaundice, blood dyscrasias, or other systemic manifestations which not infrequently are of serious import.

Since every text on dermatology lists the drugs which give rise to intoxications, and the clinical pictures which they produce, it is unnecessary to include such a list here, but there are certain types of drug eruptions which have a special interest at this time, and which may be discussed.

First of these is the "fixed" eruption, so called not because the lesions persist indefinitely, but because in recurrent outbreaks the manifestations appear each time in the same sites. These lesions are variable in type. They are usually erythematous but may become vesicular. While undergoing involution, the patches often present a polychromatic appearance and may leave a simple pigmentation which becomes intensified with succeeding attacks. Other "fixed" manifestations are urticarial or eczematous in type. The drugs most frequently giving rise to this special type of reaction are phenolphthalein, antipyrine, arsphenamine, aminopyrine and the barbiturates, but cases have been recognized as being due to acetanilid, acetylsalicylic acid, acriflavine, aminopyrine, antimony and potassium tartrate, bismuth salts, cinchophen, oil of eucalyptus, iodides, ipomea, isacen, magnesium hydroxide, mercury, quinine, salicylates, the sulfonamides and veroman. As Abramovitz has pointed out, the same type of reaction may be caused by other agents, such as alcoholic liquors, Karaya gum, certain foods, physical exertion, psychic stress, auto-



toxic substances and menstrual disturbances. In some instances, recurrences may be produced in an affected individual by more than one member of the above list.

The most common cause of fixed eruptions is phenolphthalein. It must be remembered in history taking that this drug is frequently found in pink tooth pastes, mouth washes, cake frostings, et cetera, and even in the small amounts present in such substances, may account for these outbreaks. With all drug eruptions, the size of the dose is not necessarily an important factor, since not uncommonly eruptions result from the ingestion of infinitesimal amounts of the offending medication. Testing with the suspected drug cannot be relied upon completely, because the patient does not necessarily respond to each ingestion of the causative agent.

As an example of the less common urticarial form of fixed eruption, I can cite the case of a patient with syphilis who developed a few scattered urticarial lesions after each injection of neoarsphenamine. The lesions began to appear approximately ten minutes after the treatment, and the patient could predict not only the sites at which the lesions would appear, but also the order of appearance. I watched him through a number of these reactions, and the sequence was invariably the same.

A more recent cutaneous picture, generally regarded as being at least partly medicinal in origin, was a development of the recent war. This condition, generally referred to as a lichen planus-like eruption, was largely concentrated in the New Guinea area, but occurred with lesser frequency in some other areas, including India and the Mediterranean theater. The eruption, as a rule, began only after atabrine had been taken for some weeks or months. The skin changes have been very variable, and in most instances the initial eruption has been an extensive erythematous, exudative and scaling dermatitis, often leading to the development of a generalized exfoliative dermatitis. The lichen planus-like papules may be present from the outset, or may appear only after the eczematous manifestations have been present for a variable time. Other manifestations met with are those of the mucous membranes, resembling leukoplakia or lichen planus; those of the scalp, where the ensuing atrophy and alopecia may simulate lupus erythematosus; and skin changes suggestive of those seen in poikiloderma and in "fixed" eruptions.

There has been considerable discussion as to the

importance of quinacrine hydrochloride in the production of these varied clinical pictures, but nearly all observers agree that the ingestion of the drug is a necessary factor. The rapid improvement which has usually appeared following cessation of ingestion of atabrine, and the common recurrence of manifestations, as focal flare-ups in affected individuals, following the resumption of use of the drug, have been generally accepted as indicating that atabrine is at least the most important, if not the sole, causative agent.

Due to the relative concentration in one geographic area, some writers have emphasized the etiologic influence of other theoretical factors, such as climate, emotional strain and dietary deficiencies. Caro and I, however, presented before the Chicago Dermatological Society, a man and his wife, who had not been out of the United States, and both of whom had taken atabrine for malaria, and they showed the typical lichen planus-like phase of this disorder. At that time, atabrine dermatitis was not known to us, and it was only at a later date that it was appreciated that their eruptions belonged in this group.

As mentioned earlier, the introduction of the sulfonamide group has focused attention upon drug eruptions, first, because of the relative frequency with which cutaneous reactions to these drugs occur, and, secondly, because of the severe systemic reactions, including fever and the blood dyscrasias, which may develop in association with the eruptive manifestations. The frequency with which drug eruptions appear during the use of the sulfonamides varies with the particular drug employed, such reactions occurring most often when sulfathiazole is employed, but also frequently with the use of sulfanilamide, and only occasionally with the ingestion of sulfapyridine, sulfadiazine or sulfaguanidine. Following the taking of these drugs, a wide variety of clinical pictures may develop, the most common being of simple toxic erythematous type, either morbilliform or scarlatiniform. Certain of the less common pictures deserve special mention. A varioloform type of eruption has been described as occurring from both sulfanilamide and sulfathiazole. I have seen two such cases, and in each instance the physician, unfamiliar with this type of sulfonamide reaction, had felt that the condition might well be smallpox.

Another clinical type, often seen associated with drug "fever" is the erythema-nodosum-like variety, the lesions usually developing more rapidly and

## Psychosomatic Study of a Case of Gynecomastia

By Leonard B. Shpiner, Major, MC, AUS  
Kankakee, Illinois

more extensively than do the lesions of erythema nodosum, and usually being smaller than the lesions of the latter disorder. They likewise may occur in atypical locations (face and neck).

As noted above, fixed eruptions, previously discussed, have been produced by the sulfonamides.

These drugs have less commonly produced clinical pictures resembling other diseases, such as pemphigus vulgaris, pemphigus foliaceus, exfoliative dermatitis, lupus erythematosus acutus disseminatus, angioneurotic edema and erythema multiforme.

There should also be mentioned the photosensitizing action of the drugs in this group, although there is less tendency to emphasize this aspect than was earlier the case, as the common morbilliform and scarlatiniform types occur chiefly on the covered parts. Peterkin noted reactions of the photosensitive type less frequently among the United States troops than among the British in the same area, a finding which may have been due to the fact that sulfadiazine was usually used with the former troops and sulfanilamide with the latter.

The sulfa rashes do not necessarily have any relationship to the amount of drug taken or to the concentration of the drug in the blood. The eruptions may develop within a few hours after the use of the drug or may not appear until after one to two weeks of therapy.

The local use of the sulfa drugs often has a sensitizing effect, and may lead to the development of cutaneous or systemic reactions with the oral exhibition of the drug at a later date. One must, therefore, condemn the indiscriminate use of these drugs, particularly sulfathiazole, for the external treatment of cutaneous disorders which are not due to infections, or for use in banal infections which may be expected to respond to other and older measures, with whose use complications are much less apt to ensue. This is especially true with reference to the treatment of secondarily infected eczematous or eczematoid disorders, for in such cases the local application of sulfathiazole preparations, while often effective against the infectious element, is prone to produce severe local and general cutaneous reactions.

At present, we are much interested in the types of cutaneous reaction to the use of penicillin. At first it was thought that reactions from this agent were few and unimportant. Soon it came to be

(Continued on Page 254)

VIRCHOW AND ORGANICISTS have taught for more than a century that all disease has a beginning in some pathology of the cells and tissues of the body, but observing physicians have also known that the emotions are a dominant factor in human experience.

All human beings are psychosomatic problems, and the arbitrary division into the "psyche" and "soma" in the study of disease is merely a contemporary medical attitude and not within the patient at all. This fact was recognized by Hippocrates, who advised that it is more important to know "what kind of a person has a disease" than to know "what kind of a disease a person has."

Gynecomastia may be defined as excessive size of the mammary gland or glands in the male which may occur in youth, young adult life, or middle life. It may either be idiopathic in origin or associated with disturbances of the sex glands. There is frequently discomfort or even sticking sensations in the breast. Whereas, in civilian life these individuals are able to make suitable social adaptations, in the military environment these subjects usually become the butt of ridicule. Nearly all patients suffer extreme mental anguish. Since there is little privacy, they are reticent about exposing themselves to other men, become depressed, reserved, retired, shy, timid, and may even transfer their anxiety features to other organs of the body.

*Etiology.*—The complexity of factors described by the various authorities on this subject, is proof of disagreement as to any single causative factor. Three chief causes are generally advanced. (1) Heredity as a factor is discredited in most instances, but may be responsible for the condition of pseudo-gynecomastia, an enlargement of the breast area by adipose tissue without actual increase in breast tissue. (2) Mechanical stimulation, or irritation, may play an important role in breast hypertrophy. This factor may be responsible for unilateral enlargement. It is probable that repeated minor irritations, such as rough clothing,

Presented before the Convalescent Hospital Staff, Percy Jones Hospital Center, Ft. Custer, Michigan, October 3, 1945.  
Released for publication by the Surgeon General.

habitual rubbing or pressure over a nipple area may be responsible for unilateral enlargement, i.e., stimulation of the nipple areas in females may produce hypertrophy or even colostrum without the presence of a pregnancy. (3) Hormonal imbalance is responsible for many cases of gynecomastia, and here a maze of endocrine inter-relationships produces a confusing picture. Certain cases of hermaphroditism or pseudohermaphroditism may have been associated with this condition. A few castrated males, or even those with the prostate removed, have developed breast enlargement. Several cases have been recorded in which breast changes accompanied a teratoma of the testicle, or a chorioepithelioma of the testes. Endocrine disturbances of the adrenal cortex, pituitary, and thyroid have all been found associated with cases of gynecomastia. Gynecomastia may be due to increased estrogenic production, or a decrease in the androgen-estrogen ratio. Experimental and clinical studies bear this out in part; however, they do not entirely substantiate it.

*Pathology.*—With hypertrophy of the breast in the male, there occurs ductal but not acinar proliferation, and an increase of the periductal fibrous tissue. The microscopic picture is indistinguishable from fibroadenoma or chronic cystic mastitis of the female.

*Treatment.*—Treatment may be (1) surgical, (2) endocrine therapy where overt endocrine stigmata are present, or (3) radiotherapy.

### Case Report

With the above factors in mind, the following case is presented to illustrate the interweaving of the "psyche" and "somatic" pattern.

This patient was a thirty-four-year-old soldier with thirty-nine months service, overseas eight months, in combat two months with the Ninety-fifth Division in the capacity of an ammunition carrier. He was evacuated because of an anxiety syndrome, incident to his service at the front. A perusal of his past social history revealed the following background. His parents did not get along well together, for his father was an irresponsible man, who spent the greater portion of his earnings in the pursuit of personal pleasures, and did not provide adequately for the family. He abused the patient's mother, whom the patient termed as a "weak woman." His mother, who was sixty years of age, was on a strict diet and "had to get weekly shots." He could not identify his mother's disability. The patient was one of five siblings. One brother had tuberculosis and asthma. Another brother had a serious stomach disorder and other ailments. Two sisters were living and well. There was

no history of breast enlargement in the other male members of his family. The patient was seemingly sentimental and emotional in the discussion which included his mother. It was further estimated that he was closer to his mother and liked his sisters better than his father and brothers.

*Developmental History.*—The patient had the usual childhood diseases. He came to the United States from Russia at the age of twelve years, and entered school at that age. He repeated the second grade, made grades below average, and found arithmetic and spelling difficult. He quit school at the age of eighteen years, after completing the sixth grade. Although he was able to take part and rather liked active sports, he made few friends among the children of his own age group. The patient left his home at the age of twenty-three years because of conflicts with his father. His work history showed a tendency to frequent shifts of employment. He first worked as a peddler, then a laborer. He drove a taxi for sixteen months, but left this employment because he saw "many bad things." He told of explaining to his mother the immoral situations he witnessed while driving a taxi. His mother was horrified and urged him to change jobs before the job "made a bum out of me." Then he worked as a film loader and general helper, earning \$40 per week prior to induction.

*Military History.*—During his basic training he went on sick call frequently and was hospitalized because of gastrointestinal distress. This he attributed to a change of diet from which he was formerly accustomed. The organic workup did not reveal any pathologic condition. At this time he began to develop headaches. He admitted being made miserable by the slurring comments of other soldiers. He stated that he was the subject of disparaging remarks, was frequently laughed at and persecuted. However, he attempted to ignore these situations and make the best adjustment under these trying conditions. During his front line service, his headache became increasingly severe, he vomited more frequently and was then evacuated to the Zone of the Interior, where, he stated, he made a remarkable recovery.

*Sex History.*—The patient reached puberty about the age of twelve years, and his first nocturnal emission occurred at that age. He masturbated until the age of fifteen years; then because of numerous guilt feelings he ceased this practice. He manifested some interest in girls at the age of seventeen years, but stated he had "no luck" with them because of his breasts. He denied any heterosexual congress as a civilian, and as a soldier he shied away from girls because of the possibility of venereal disease. The army films had a tendency to frighten him away from any contemplated sex ventures. He married while on a convalescent furlough to a woman, twenty-four years of age, whom he had known for six years. She was a college graduate. The patient stated that he was very much in love with his wife. However, he believed that his in-laws were trying to break up his marriage, and his immediate concern was to get his



wife located in a home of their own. He further stated that his marriage was complicated by reason of his deformity. His wife was extremely curious about this condition, and he had to undress in private so as not to permit her to see his breasts. He felt that possibly this condition might threaten his marital felicity. Regarding the more intimate phases of his sex life, he went home on week ends and was able to consummate sexual congress to the mutual satisfaction of both parties. He practiced marital continence. He described his sex act as normal, ejaculation as not premature, and there was quantity to the ejaculate.

**Physical Inspection.**—He was a well-nourished white male presenting enlarged breasts about the size of a lemon and of equal size. The breasts were soft and flabby, and did not contain glandular tissue. The nipples were normal in size, and no secretion was obtained from the nipples on pressure. His penis was definitely small; both testes were present in the sac. The right testis was the size of a pea and the left was about two to three times that size. The general body hair distribution was present on face, arms, axilla, pubes and legs, but was rather sparse on the chest. He had a girdle distribution of fat, citing a recent gain of 30 pounds. He had no blurring of vision, no temperature intolerance, and his appetite was good. He had no craving for carbohydrates, denied excessive water intake and did not urinate excessively.

**Laboratory Data.**—The glucose tolerance test was within normal limits. However, he spilled sugar at 115 and 90 mg. respectively, showing a lowered renal threshold. X-ray of the skull showed calcification of the falx cerebri, with the sella turcica normal.

### Discussion

This patient had gynecomastia as long as he could remember, associated with under-developed sex organs. Gynecomastia may be present as a solitary finding with no concomitant endocrinopathy. It may be of special significance only as an incidental finding. However, in this particular case endocrine stigmata were present. It is postulated that normal development of the genital apparatus proceeded until the age of twelve and also at that time his breasts apparently reached maximum size. From that period on, somatic growth did not occur.

In speculating what may have occurred at this stage of pubescence, two postulates are advanced.

(1) Since the action of the testicular hormone is dependent on the gonadotropic factor of the anterior pituitary, there may have been a deficiency in this factor; thus, the genital organs may not have been brought to a full stage of somatic maturity. (2) Perhaps the more tenable explanation

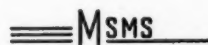
is that there may have been an inherent structural defect in the testes, so that the genital organs as receptors could not produce enough male hormone to bring about the growth of the penis, scrotum, prostate, seminal vesicles, epididymus, vas deferens, and the masculine patterns of aggressiveness, vigor and self-confidence.

One can only speculate on the etiologic relationship of gynecomastia on his "psychic life." Aside from this anatomic structural defect, his history revealed the coexistence of the rich ingredients which make for a traumatic neurosis, namely, (1) hereditary constitutional predisposition, (2) situation, and (3) conflicts. No attempt was made to assign precedence to either the endocrine or psychopathologic viewpoint in the causation of his neurosis.

Though treatment was not attempted on this patient, it was felt that surgical intervention (breast plastic operation) plus suggestive psychotherapy would be of benefit in helping this patient resolve some of his difficulties.

### Conclusion

Gynecomastia, as an anatomic structural defect, has subjected this patient to actual as well as implied psychic trauma, causing anxiety symptoms of lifelong duration, and a lowering of his social adaptive capacity.



### NORTHERN TRI-STATE MEDICAL ASSOCIATION

The Northern Tri-State Medical Association will hold its seventy-fourth annual meeting on April 8, 1947, in the Rackham Memorial Educational Building in Detroit. Donald Douglas, M.D., of Detroit is president. Drs. Edward D. Spalding and Wm. Henry Gordon of Detroit are members of the Council.

#### Morning Session—8:30 A.M.

##### Registration

Welcome Address—Winfred B. Harm, M.D., President, Wayne County Medical Society

"Recent Advances in Thoracic Surgery"—Wm. M. Tuttle, M.D., O'Brien Chest Clinic, Detroit

"Recent Advances in the Treatment of Diabetes"—J. W. Conn, M.D., Associate Professor of Internal Medicine, University of Michigan

"Recent Developments in the Management of the Menopause"—Sprague H. Gardiner, M.D., Indianapolis, Indiana

"Enigmatic Anemias"—William Wagner, M.D., Director, Department of Pathology, St. Michael's Hospital, Toronto, Canada

#### Luncheon—12:00 M.

Speaker—George F. Lull, M.D., American Medical Association

#### Afternoon Session—2:00 P.M.

"Surgical Aspects of the Abdominal Wall"—Frederick A. Coller, M.D., University of Michigan

"Medical Genetics and Public Health"—Laurence H. Snyder, M.D., Department of Zoology and Entomology, Ohio State University

"Recent Advances in Cardiology"—Edward D. Spalding, M.D., Detroit

## Coloboma of Optic Nerve

By Harold H. Harms, M.D., and  
Frank L. Ryerson, M.D., F.A.C.S.  
Detroit, Michigan

**A**LTHOUGH COLOBOMATA OCCUPY a moderate share of the ophthalmologic literature, colobomata of the optic nerve, unassociated with large defects of the surrounding choroid, are quite rare. Rarer still are those cases which have fairly useful vision in the affected eye, despite the large defect, although Adler<sup>1</sup> described a case of bilateral partial colobomata of the optic nerve, with almost normal central vision in spite of the large field defects.

### Theories of Cause

Since 1821, when the term *coloboma* was suggested by Walther for these congenital anomalies where a portion of the eye is lacking, various theories have been advanced as to the cause of these defects in ocular structure. These theories include<sup>4</sup> intrauterine inflammation, failure of vascular development in the mesoblast surrounding the cup, et cetera, as causes for the defects, but have many associated points difficult of explanation. The factor of heredity is also recognized in colobomata in general, Snell having found clinical evidence of hereditary transmission in five generations. Transmission is specific for one group of defects and follows Mendelian laws, the deformity usually appearing as a dominant characteristic (although Kayanagi in 1921 produced colobomata in inbred rats as a Mendelian recessive).

In general, however, the most widely accepted theory of cause is that of von Ammon, which explains the optic nerve defect as being due to faulty closure of the fetal cleft. This is consistent with the reasoning of Seefelder,<sup>6</sup> who demonstrated that the closure of the ocular cleft began in the middle and advanced distally toward the cup and proximally toward the stalk. He thought that if the cleft failed to close in the proximal portion, then coloboma of the nerve would result.

The cause of this faulty closure of the fetal cleft is in turn debatable, von Hippel<sup>8</sup> having assumed that thickening of the mesoderm prevented union of the layers. However, von Szily<sup>9</sup> and Seefelder<sup>2</sup>

found no especial thickening of the mesoderm in rabbit colobomata, and they concluded that either marked proliferation or almost complete retardation of growth of epithelial elements preceded coloboma. This is well borne out by the work of Payne<sup>5</sup> on human embryos, with rapid overgrowth of retinal elements, and inclusion of the retina in the stalk of the optic nerve.

### Characteristics

The size of the pseudodisc varies greatly in coloboma of the optic nerve, ranging from normal to as much as twenty times normal, but it is usually<sup>7</sup> two to four times normal. The deep excavation of the disc, often resembling a marked glaucomatous cupping, is more pronounced in the inferior portion, and its color may vary from grayish white to the more frequently seen dull bluish pink, without the mottling characteristics of the lamina cribrosa. The distribution of the vessels, which is the most distinguishing characteristic, is highly variable. According to Caspar,<sup>3</sup> the arrangement of the vessels in coloboma of the optic nerve may be classified in three groups: (1) cases in which all the vessels emerge from the lower portion of the pseudodisc, even those which later turn upward; (2) cases in which all the vessels emerge at or a little above the center, their arrangement being almost normal, and (3) cases in which the vessels emerge at the circumference of the disc, and appear to bend sharply around its edges.

The vision is usually seriously impaired, although it may be normal. Coloboma is usually unilateral, although it may be bilateral. Visual field defects vary from corresponding enlargement of the blind-spot to concentric contraction. There may be contraction of the upper portion of the field, or a centrocecal scotoma.

### Case Report

A colored housewife, aged fifty-one years, was first seen in the clinic on May 27, 1946, complaining of pain behind her eyes, of three weeks' duration. She stated that her eyes first presented difficulty at the age of thirteen years, when she began to have difficulty with her school work, with an associated supraorbital headache. Spectacles fitted at that time corrected the difficulty, but about once a year since then poor vision had developed, with a sensation of a veil passing before both eyes, which was corrected by a yearly change of spectacles. Her medical history was noncontributory, as was her family history, as neither parent nor any of the other nine children had had a fundus examination.

# COLOBOMA OF OPTIC NERVE—HARMS AND RYERSON

## Examination:

Uncorrected visual acuity, R. V. 20/40; L. V. 20/30  
Corrected visual acuity, R. + .62 sph 20/15 —1  
L. + .25 sph 20/25 +3  
Add: + 1:50 O. U. Jaeger No. 1 at 15 inches.

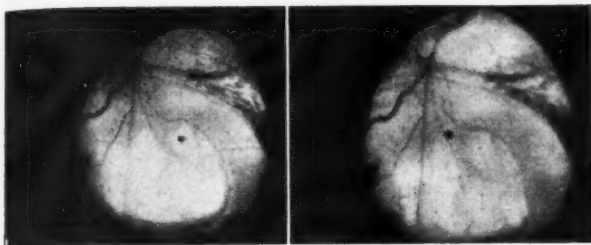


Fig. 1. Photographs of fundus: (left) superficial view; (right) deep view.

There was no nystagmus, and extraocular movements were normal. Maddox rod and alternate cover test showed no phoria. Lachrymal apparatus was normal. Intraocular tension (Schiotz) was 21 and 19 mm. mercury, right and left, respectively. Media were clear bilaterally, and irides were normal. The right fundus was normal, and the left was normal except for a large depression in the region of the disc, about four times the size of a normal disc, with the vessels bending sharply over the inferior edge. The depth of the excavation was about 12 diopters, and the color of the deepest inferior portion was bluish white. The area above that was bluish pink, with a mottled triangular veil over its temporal portion, resembling the lamina cribrosa. Occupying the superior area and exhibiting no definite excavation was what appeared to be the upper one-third of an optic disc, pinkish in color, with the vessels entering it in a more nearly normal pattern, although they were slightly nasal (Fig. 1.). Even the sharply bending vessels at the inferior portion of the pseudodisc could be traced to this area.

There was no defect of the surrounding retina or of the macula.

Visual fields on June 19, 1946, showed a normal field for the right eye, except for a very slight superior depression. The left eye showed a slight peripheral depression of form fields (Fig. 2) with a 1° test object, most marked superiorly. Projection on a tangent screen at one meter distance showed a much enlarged blindspot (Fig. 2). No separate central scotoma was demonstrable.

## Comment

A case has been presented, exhibiting some of the characteristics of typical unilateral coloboma of the optic nerve, with photographs of the defects at various depths. The increase in size of the pseudodisc, the depth of its excavation (especially inferiorly), and the visual field changes with considerable enlargement of the blindspot and some

peripheral depression of the field, are quite characteristic. Vision is strikingly good, considering the extent of the defect.

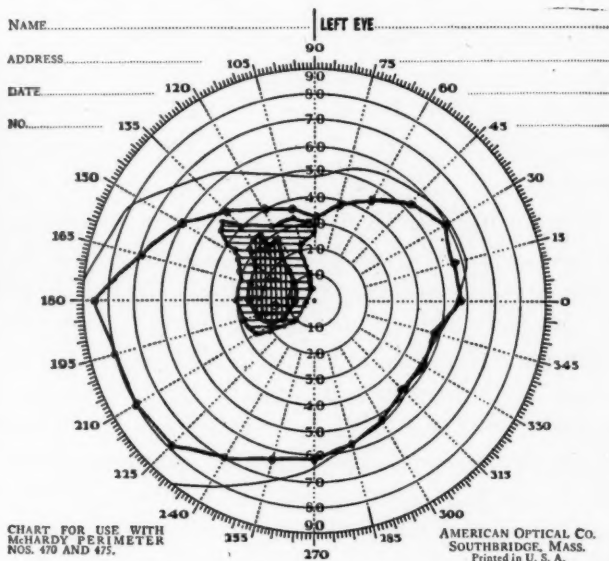


Fig. 2. Visual field of left eye with 1° white test object. Enlargement of left blindspot is shown by crosshatched area for 2° white object on tangent screen, and by horizontal striate area for a 1° white test object.

## Bibliography

1. Adler, F. H.: *Am. J. Ophth.*, 20:777-778, (Aug.) 1937.
2. Bach, L., and Seefelder, R.: *Atlas der Entwicklungsgeschichte des menschlichen Auges*. Leipzig: 1911-1914, Pts. 1, 2, 3.
3. Caspar, J. H. R. L.: *Ueber das Coloboma des Sehnerven*. Bonn: J. Bach, 1887.
4. Duke-Elder: *Textbook of Ophthalmology*. Vol. 2, p. 1252, 1938.
5. Payne, B. F.: *Tr. Am. Ophth. Soc.*, 37:458-464, 1939.
6. Seefelder, R.: *Arch. Ophth.*, 90:129, 1915.
7. Steinberg, T.: *Am. J. Ophth.*, 26:846-849, (Aug.) 1943.
8. von Hippel, E.: *Die Missbildungen u Angeborenen Fehler des Auges*, 2. Aufl., 2: Kap. IX, 27, 1918.
9. von Szily, A.: *Klin. Monatsbl. f. Augenh.*, 1945. (Suppl.) 201, 1907.

## LEHIGH VALLEY PLAN PAYS HOSPITAL BILL OF \$1,260.50

Hospital Service Plan of the Lehigh Valley, Allentown, Pa., has just paid a hospital bill of \$1,260.50. The Blue Cross patient was Mrs. Barbara Andrews who spent twenty-two days in the Allentown Hospital. The \$1,260.-50 hospital bill, the greater part of which was for penicillin, was covered in full except for a \$2.00 ambulance charge.

Earlier in the year, \$352 was paid Mrs. Andrews for another hospital stay, making a total of more than \$1,600 paid her in benefits during 1946.

—Blue Cross Bulletin, December, 1946.

All factories should include a chest x-ray as part of the pre-employment examination. As the advantages of an x-ray program become understood, factories may be expected to provide such measures as routine procedure.



# Editorial

## MENTAL HYGIENE FOR CHILDREN

A PROGRAM FOR mental hygiene children's clinics has been developing in Michigan for over a year. So far, such clinics have been largely lay inspired.

During the war about one and a quarter million persons were rejected from the draft on account of mental and emotional conditions. Over half of the hospital beds in the United States are occupied today by mental patients. Medical departments of the armed forces have shown that vast numbers of those in the services who developed disabling emotional conditions or adjustment problems, even to a degree requiring removal from the services, were individuals who had behavior problems or who had been more or less "problem children."

Some type of guidance for parents or school authorities, or for the children themselves, would in many instances have guarded against these failures in the military, and would have salvaged these young people for useful lives. Many of them would not have been taken into the armed forces, for we now know that they should never have been exposed to the stress and strains of military adjustment.

To recognize and to guide the preventive procedures needed to avoid these hazards is primarily and fundamentally a responsibility of the medical profession, and the medical men of the state and nation should be most interested in working out whatever plans and programs are necessary.

Each county medical society, as well as the state medical society, should be ready to do its part. Each society should lose no opportunity to give advice, to help with the provision of whatever facilities are necessary to study these emotional or behavior problems, and to treat them in their incipency. Child guidance clinics have been established in nine centers in Michigan and are considered in more. The hitch so far has been the so-called impossibility of securing a sufficient number of trained child psychiatrists who are willing to do the work.

Our schools and our courts are discovering mentally unbalanced and delinquent children who need medical or psychiatric care as well as trained su-

pervision and guidance. The state organizations now promoting this program say they are handicapped by lack of trained doctors. We admit the woefully insufficient numbers of well-trained psychiatrists, but we do believe that any physician with proper training could apply his skill to children and youths. IT IS OUR DUTY AND OUR OBLIGATION.

We recognized this problem editorially in the February, 1943, number of THE JOURNAL. There were three editorials on the subject, one quoting the chairman of the State Mental Hygiene Committee, and two by a well-known psychiatrist who wished to remain anonymous. Attention was called to the fact that every error in taking into the service a mentally unfit person was a thirty thousand dollar mistake, and that fifteen thousand such mistakes had occurred in 1942 alone. Everyone of those cases could cost the government that amount for care for a "service connected disability."

Any help the profession can now render will not only be extremely patriotic, but will provide this tremendous group of persons with professionally, medically trained leaders, instead of risking their drifting ultimately into some layman supervised regime. We have a clear-cut opportunity to make another first for Michigan by stepping into the procession and exerting our influence for well-chosen leadership. We have and can supply that leadership.

## MEDICAL PROPAGANDA

THE TREND OF REPORTS now is that the fight was on for socialized medicine but that it is not now active. Articles tell of the fight as if it were a thing of the past.

But it is not forgotten. President Truman in his State-of-the-Nation speech again suggested compulsory health service. Mrs. Roosevelt in her "column" comes back to it in insidious ways. In her opus of December 18, 1946, she accuses the American Medical Association of opposing all medical care programs, such as the nonprofit plans of various states and the Wagner-Murray-Dingell plan, grouping them together. This could only be done in a deliberate piece of propaganda, for she knows full well that the voluntary nonprofit plans

for care, as sponsored by the profession, have no kinship with the socialized medicine plan of Roosevelt-Truman-Wagner-Murray-Dingell-Pepper, et al. To group these two proposals together, and to array the American Medical Association against them, is misleading and vicious misrepresentation of fact, and with the hold she has on the imagination of a great mass of readers she should be superior to such machinations.

But she is a propagandist without qualms. On January 11, 1947, she "Views Canadian Medical Plan." "In Saskatchewan they found it difficult to keep good doctors in their rural areas, so taxed themselves locally in order to give their doctors sufficient income." They have a provincial plan costing the individual five dollars a year, and the family not over thirty. She points out this low rate and adds, "If the revenue from the special tax should prove insufficient, the province will undertake the additional care." This last sentence is the joker, for that does not mean additional taxes to the average reader. The province will provide, but the reader does not question how. This is another underhanded thrust in the way of socialized medicine.

The December 21, 1946, issue of the *Saturday Evening Post* contains an article by Greer Williams that every doctor should read and ponder. There are many timely suggestions and some wiley innuendoes. The charge is made, and authorities quoted, that only half of the profession is worth its salt. The article suggests some ways for the layman to find out which doctors are reliable. The insinuation that half of them are not giving good care, are careless, or unreliable, runs all through the article.

As an individual, and as a student of medical training, medical men, and medical services, the writer wishes to go on record here and now as repudiating this statement, and we are happy to disagree with one very famous medical man named and with a group of others who were mentioned as "medical authorities," "*distinguished physicians*," who to improve the medical profession would "chloroform half of the profession."

In any mass of men there will be some with less ability and knowledge or training than others, but in medicine, with all the safeguards established, that list is very small. If called upon to make an estimate, if it became necessary to employ one of the physicians in the community which we know and have known intimately for all our pro-

fessional life, we would not hesitate to place our own care in any one of at least ninety-five per cent of the group.

We deplore the poor estimation of doctors evidenced by this article and the so-called medical authorities. We believe that is very unfavorable propaganda.

There are no groups of men with higher ideals and training, as a whole, and this we thoroughly believe in spite of Greer Williams.

By the way, who is Greer Williams?

Is she "tops" in the field of writing?

As a writer on medical subjects, we feel she should be chloroformed.

### HOW TO SELECT A FAMILY PHYSICIAN

ONE'S FIRST THOUGHT is to call the county medical society when wishing to select a family physician. That certainly should be one of the first steps, even though propagandists for social change would have us believe that the county medical society is biased and would give a rubber stamp endorsement of its members. Knowledge of the prospective doctor's success in practice is desirable. Many other methods of selecting a physician are available. Is he on the hospital staff? Is he a member and an attender of the county medical society? What is his standing with the bank? What are his social affiliations? Is he active in civic affairs? Does he have the respect of the clergy? What of his own family life? Is he reasonably busy or overworked? Is he genuinely interested in his profession, or is he greedy? Is he a doctor because he loves it or as a means for a good livelihood?

Such a line of study sounds perverse or useless, but in selecting a doctor for one's family, one is selecting the person who will stand in relation to him and his family in a way that would and should be entrusted to the most reliable and resourceful person to be found. No effort is too great to satisfy this need, and it should not be left to emergency demands. After sufficient study, one should call upon the doctor and then make the decision by first-hand contact. No doctor will resent such contact, and every doctor should feel complimented to be so considered.

In selecting a specialist, the profession has done the job in a workmanship manner by the establishment of fifteen American Specialty Boards, whose certificate is a genuine stamp of approval. Not all specialists have passed these boards, and not

## EDITORIAL

all have the opportunity to do so, but the method of approval is there, and the same advancement for general practitioners is now in process of development. Again, probably a great majority cannot take the time to pass these requirements, but the method is being considered. We also know that some doctors are not in favor of these boards and their work, believing that they are setting too high a standard. These boards are a purely voluntary development, available to those who wish to use them, and not compulsory either to the doctor or the patient. However, for certain examinations the government is demanding such certification.

### SPECIAL COMMITTEE ON INFECTIOUS DIARRHEA

At a meeting of the Special Committee on Infectious Diarrhea held January 8, the chairman reviewed the action leading to the formation of this joint committee to deal with this important subject. He pointed out that the presence of obstetricians, pediatricians, and the Director of the State Laboratories on the committee should insure a comprehensive report on this subject.

Attention was called to the frequency of newspaper reports of epidemics here and there about the country and to the fact that no hospital should consider itself immune, merely because it had been fortunate in the past. The relatively mild epidemic occurring in the Saginaw General Hospital in September, 1946, was discussed with particular reference as to how the epidemic was brought under control and the nursery reopened for new cases within a period of one week.

This led to a discussion of the service offered by the State Health Department to institutions and hospitals where the disease may be epidemic. When requested to do so by the Hospital Superintendent, the State Health Department is prepared to send a team to study the situation and to submit a report of their findings together with suggestions. While the availability of such a service is not generally known, it is interesting to note that the team has been utilized in at least seven of the larger cities of the state, as well as having been called to at least two Detroit hospitals.

Dr. W. F. Seeley gave considerable emphasis to the point that the supervision of maternity hospitals and nurseries would never be very efficient until the licensing of such institutions was made the responsibility of the Board of Health, rather than being under Social Welfare. He pointed out that this matter had been given considerable study a few years ago by the Maternal Health Committee, but nothing came of it. Dr. G. D. Cummings volunteered to get Dr. Alexander Campbell's viewpoint and report later. If maternity hospitals could be given a closer tieup with the health agencies at the state level, it would become much easier and simpler to bring about certain preventative procedures and regimens.

Dr. Harold Henderson and Dr. Campbell referred to the advisability of some one or more members of the hospital staff accepting the responsibility of the newborn nursery. In many instances it has seemed that this assignment is best handled by a pediatrician. This is particularly true if a hospital is offering resident training in pediatrics.

In view of the fact that Dr. Cummings has been working on this problem for the past four years, the chairman requested him to submit a first draft outline or paper on the fundamentals of prevention and treatment of epidemic diarrhea of the newborn for the consideration by the committee at its next meeting. Dr. Cummings agreed to do this.

### ON THE RUN

In cor pulmonale, where the available arterial oxygen is unusually low and the cardiac output high, digitalis is not only useless but actually dangerous.

• • •

Locally implanted penicillin is of greater value, unit for unit, than injected penicillin in the control of wound infection.

• • •

When the edema of cardiac failure is unmoved by diuresis, suspect accompanying liver cirrhosis.

• • •

Painless hematuria is one of the most frequent signs of early renal tuberculosis.

• • •

The symptoms in mesenteric thrombosis are more acute and demanding when an arterial embolus rather than a venous thrombosis is the primary cause.

• • •

It often takes several hours after the onset of an intra-abdominal surgical emergency for distinctive diagnostic signs to develop.

Selected by W. S. REVENO, M.D.





# Proceedings of the Detroit Physiological Society

Session of November 21, 1946

The following topics were discussed, and abstracts are herewith presented.

## Vitamins in the Urine of Newborn Infants

Brenton M. Hamil, M.D., Department of Pediatrics, Henry Ford Hospital, and Harold H. Williams, Ph.D., Children's Fund of Michigan, Detroit.

The concentrations of thiamine, riboflavin, niacin, N<sup>1</sup>-methylnicotinamide, pantothenic acid, biotin and vitamin C were determined in urine from twenty-four breast-fed infants during the first seven days postpartum. Vitamin C was determined in cord blood and in blood samples from the mothers and infants. The computed average daily intake of each of the vitamins from breast milk was compared with the calculated urinary excretion of each vitamin for each twenty-four-hour period. Both concentrations and daily excretions were relatively high during the first three days, the period of rapid weight loss and low milk intake. The maximal average concentrations of thiamine (13 micrograms per 100 c.c.) and pantothenic acid (213 micrograms per 100 c.c.) were found in the urine excreted on the third day of life; of riboflavin (140 micrograms per 100 c.c.) on the first day; and of nicotinic acid (128 micrograms), N<sup>1</sup>-methylnicotinamide chloride (3820 micrograms), and biotin (4 micrograms) on the second day of life. With subsequent rapid weight gains and increasing intakes of vitamins, urinary concentrations and daily excretions diminished. The average daily excretion by the infant was estimated to be in the same range as the total amount in the baby's extracellular fluid.

The vitamin C content of cord blood ranged from 0.66 to 2.18 mg. per 100 c.c. Maternal serum contained 0.04 to 1.19 mg. per 100 c.c. on the first day postpartum, while the infant's blood ranged from 0.20 to 1.72 mg. The changes in blood level of vitamin C varied widely among the individual women and infants during the first week postpartum. In general, concentrations of vitamin C in urine were high during the first two days of life but dropped to low levels by the fourth day.

The data suggests the possibility that the physiologic processes of intrauterine development require

greater saturation of the tissues with these vitamins than is necessary in the gaseous environment of extrauterine life; or, that they accumulate in fetal tissues in varying amounts depending upon changes in pH, oxygen tension and physical factors, alteration of which at birth causes their excretion.

## Inactivation of Prothrombin with Fibrinolysin

Walter H. Seegers, Department of Physiology, Wayne University College of Medicine, Detroit.

Fibrinolysin is prepared from bovine plasma. It is capable of decomposing fibrinogen so that the latter can no longer be clotted with thrombin. It will also decompose a fibrin clot. It is unable to do this in ordinary plasma because the fibrinolysin is found therein in an inactive form, and during the isolation procedure it is activated in the laboratory. In this form, active concentrates have recently been prepared and furnished to us (Eugene C. Loomis, Parke, Davis and Company) as dry amorphous saline soluble material.

We discovered that this fibrinolysin preparation will destroy purified prothrombin very rapidly. Much depends, however, upon the relative quantities of fibrinolysin and prothrombin used in the experiments. If large quantities of prothrombin are mixed with a small amount of fibrinolysin, equilibrium conditions are reached and appreciable quantities of prothrombin remain in solution. Extensive study of such conditions show that the inactivation does not follow stoichiometric proportions or any of the classical enzyme reactions.

In order to demonstrate the inactivation of prothrombin by fibrinolysin, it is necessary to have purified materials because there is a powerful inhibitor present in plasma, which can destroy fibrinolysin and thus protect prothrombin. For that reason, fibrinolysin can be added to plasma and there is no destruction of prothrombin. It is becoming increasingly evident that the complicated reaction systems involved in the blood clotting mechanism extend into far more general areas than had previously been anticipated and it requires work with purified factors to discover these new and unexpected relationships.

# Michigan's Department of Health

WM. DE KLEINE, M.D., Commissioner, Lansing, Michigan

## SALMONELLA TYPES ISOLATED

The following Salmonella types were isolated by the Bureau of Laboratories, December 1, 1945 through November 30, 1946.

S. typhimurium	45
S. newport	23
S. paratyphi B	13
S. derby	12
S. typhimurium var. copenhagen	10
S. cholerae-suis var. kunzendorf	9
S. anatum	8
S. oranienburg	6
S. montevideo	5
S. bareilly	5
S. manhattan	4
S. give	4
S. oregon	4
S. paratyphi A	2
S. tennessee	2
S. bredeney	2
S. worthington	1
S. paratyphi B, var. java	1
S. californica	1
S. panama	1
S. bovis moribificans	1
untypeable	1
Total laboratory isolations	160
Total Cases of Salmonella infection reported	76

These Salmonella types are all of human origin and do not include repeat tests or isolations of Salmonella typhi. There is a decided discrepancy between the number of positive isolations made for physicians and the number of cases of Salmonella infection reported to the health department. Salmonella infections were made reportable in March, 1944. Prompt reporting would be appreciated.

## INCIDENCE OF COMMUNICABLE DISEASE

Disease	December, 1946	December, 1945	Totals for 1946*	Totals for 1945
Diphtheria	30	77	385	630
Gonorrhea	911	941	12635	12565
Lobar Pneumonia	74	111	817	974
Measles	251	1016	42261	6328
Meningococcic meningitis	11	26	183	270
Pertussis	892	654	8115	5339
Polioomyelitis	54	13	1077	215
Scarlet fever	727	784	5976	9304
Syphilis	1336	1252	18051	16046
Tuberculosis	498	454	5547	5471
Typhoid fever	2	8	88	58
Undulant fever	9	8	135	246

\*Provisional figures.

## SIGNIFICANT FIGURES

In 1920, communicable diseases accounted for 34.6 per cent of the total deaths in Michigan. In 1945, that percentage was down to 9.7.

## PRENATAL LETTERS REVISED

In January a set of revised prenatal letters was mailed to each physician in the state. These ten letters, co-sponsored by the Department of Health and the state medical society, are mailed (one each month) to any expectant mother who sends in a request card. Physicians may obtain a supply of request cards for their offices from their local health department.

## STATE COUNCIL OF HEALTH

The quarterly meeting of the State Council of Health was scheduled for January 17 at the School of Public Health, University of Michigan. At the first meeting of the year attention is usually given to any changes in the state's rules and regulations for communicable disease control.

Henry F. Vaughan, D.P.H., Ann Arbor, is president of the council. Other members are C. L. Hess, M.D., Bay City; Harold E. Wisner, M.D., Detroit; Wesley H. Mast, M.D., Petoskey; and Kenneth A. Easlick, D.D.S., Ann Arbor.

## FIFTH X-RAY UNIT ADDED

The fifth x-ray unit of the Department of Health went into operation December 16. This trailer-type unit will help meet the constantly growing demand for x-ray service which has resulted in all units being booked solid for six months or more ahead. The department hopes to intensify its industrial program by offering surveys on a regular annual basis.

## NEWS OF PERSONNEL

E. S. Parmenter, M.D., has been appointed director of District Health Department No. 4, with headquarters at Rogers City. Dr. Parmenter is a native of that part of the state and has practiced in Alpena for several years.

\* \* \*

Chester V. Tossy, D.D.S., has been appointed assistant director of the Bureau of Public Health Dentistry of the Michigan Department of Health. A graduate of the University of Minnesota, Dr. Tossy was for thirteen years on the staff of the dental division of the Children's Fund of Michigan. He served in the U. S. Navy during the war and since then has been in private practice in Detroit.

## BLUE CROSS CONTINUES TO GROW

The latest figure on Blue Cross enrollment (September 30) shows a total membership of 24,390,763. The growth during the third quarter 1946 exceeded all previous third quarter enrollment figures. In the vanguard of the eighty-seven plans in the United States and Canada are Associated Hospital Service of New York, Massachusetts Hospital Service, Michigan Hospital Service, Associated Hospital Service of Philadelphia and Hospital Service Association of Pittsburgh, all with over a million subscribers.

Leaders in the percentage of population enrolled are: Hospital Service Association of Rhode Island with 63 per cent; Massachusetts Hospital Service with 46 per cent; and Group Hospital Service, Inc., of Wilmington, Del., with 45 per cent. The September figure gives Blue Cross one enrollee for every six persons in the United States.



Health  
Public  
meeting  
ages in  
disease

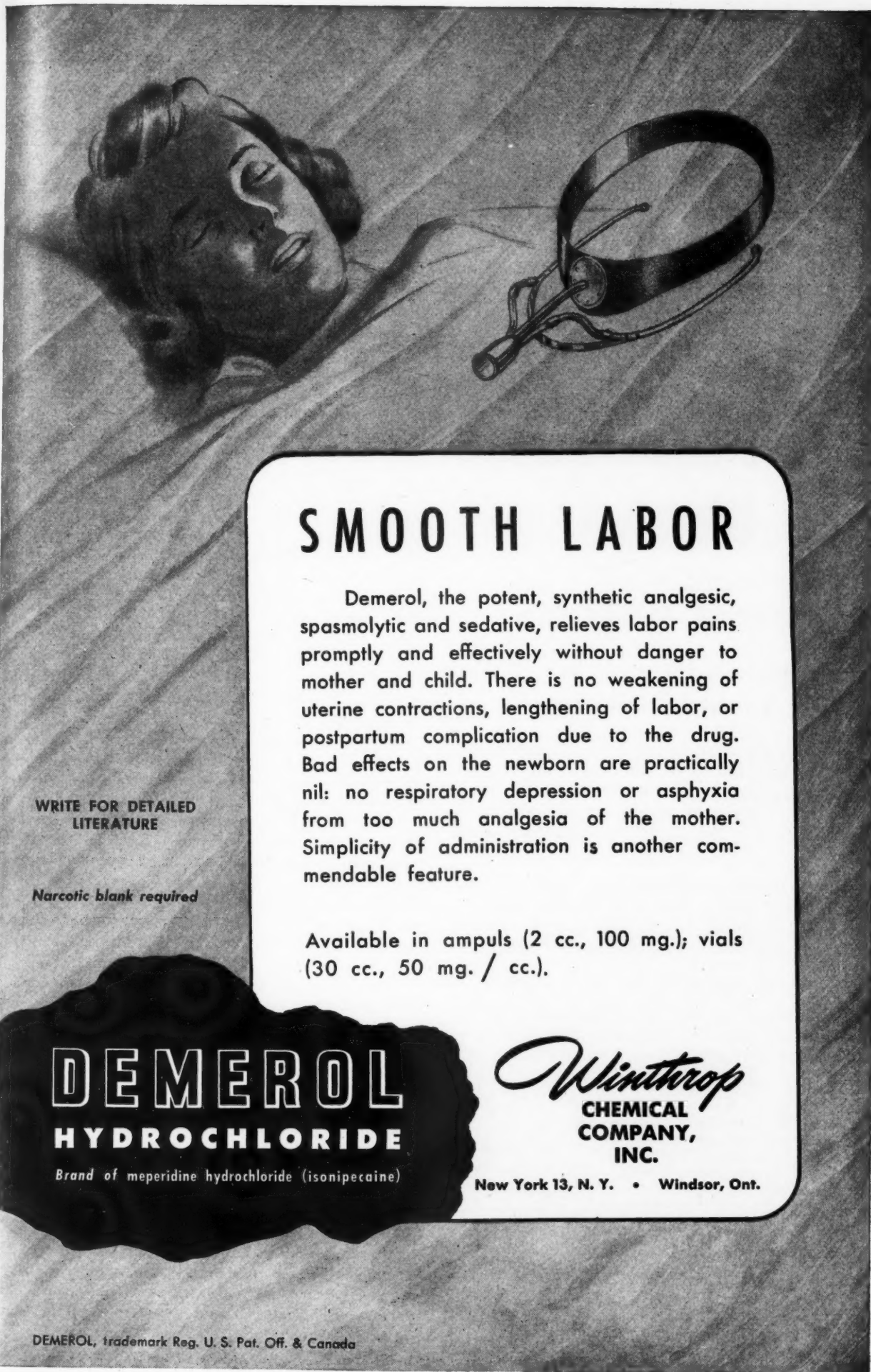
pres-  
Hess,  
troit;  
Eas-

Health  
unit  
-ray  
oked  
ment  
ring

tor  
ers  
art  
rs.

nt  
he  
he  
rs  
nd  
ne  
it.

r  
n  
l  
-  
.



**SMOOTH LABOR**

Demerol, the potent, synthetic analgesic, spasmolytic and sedative, relieves labor pains promptly and effectively without danger to mother and child. There is no weakening of uterine contractions, lengthening of labor, or postpartum complication due to the drug. Bad effects on the newborn are practically nil: no respiratory depression or asphyxia from too much analgesia of the mother. Simplicity of administration is another commendable feature.

Available in ampuls (2 cc., 100 mg.); vials (30 cc., 50 mg. / cc.).

**DEMEROL**  
**HYDROCHLORIDE**  
Brand of meperidine hydrochloride (isonipecaine)

*Winthrop*  
**CHEMICAL  
COMPANY,  
INC.**  
New York 13, N. Y. • Windsor, Ont.

WRITE FOR DETAILED LITERATURE

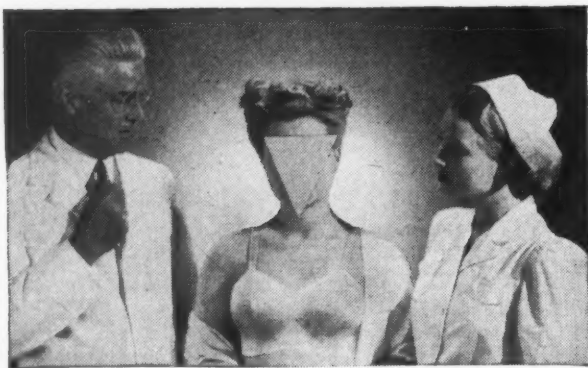
Narcotic blank required

DEMEROL, trademark Reg. U. S. Pat. Off. & Canada



# "EUREKA! I THINK THIS IS IT!"

Said A Doctor When Shown  
The Spencer Breast Support



## SPENCER BREAST SUPPORTS

Hold Heaviest Posed Breasts In  
Healthful Position

Improve circulation and tone, rendering breasts less likely to inflammation or disease. Encourage squared shoulders, aiding breathing. Release strain on muscles and ligaments of chest, neck, shoulders and back.

Aid antepartum-postpartum patients by protecting inner tissues, helping prevent outer skin from breaking; guard against caking and abscessing during postpartum.

Individually designed for each patient.

For a dealer in Spencer Supports, look in telephone book for "Spencer corsetiere" or "Spencer Support Shop," or write direct to us.

SPENCER, INCORPORATED,  
129 Derby Ave., New Haven 7, Conn.  
In Canada: Rock Island, Quebec.  
In England: Spencer (Banbury) Ltd.,  
Banbury, Oxon.

Please send me booklet, "How Spencer  
Supports Aid the Doctor's Treatment."

May We  
Send You  
Booklet?

Name ..... M.D.

Street .....

City & State ..... H2-47

**SPENCER INDIVIDUALLY DESIGNED SUPPORTS**  
FOR ABDOMEN, BACK AND BREASTS

## Woman's Auxiliary

### REPORTS ON TB SPEAKING PROJECT

The sixth annual TB Speaking Project continued to improve over previous years. This year, sixty schools from forty counties sent in scripts for state judging. Last year, fifty-two schools from thirty-two counties participated.

There were twenty local broadcasts over nine radio stations, with a total of five hours and thirty minutes.

Bay, Houghton, Ingham and St. Clair counties had the largest number of school entries. In each of these counties the local Woman's Auxiliary to the Michigan State Medical Society and, in Bay and Ingham, the local tuberculosis associations were especially active in promoting the project. Local awards were also made in several counties.

The judges of the project were Mr. Andrew Kovace of the Michigan Tuberculosis Association, Mr. Harold Sponberg of the Speech Department, Michigan State College, and the Medical Auxiliary chairman.

The winners of both the first and second place awards were guests of the sponsors on December 20 at the time of the state broadcast over WKAR, the Michigan State College station.

Mrs. R. H. Alter of Jackson, president of the Woman's Auxiliary to the Michigan State Medical Society, presented the medals. Mr. T. J. Werle, executive secretary of the Michigan Tuberculosis Association, introduced the speakers.

The first-place winners broadcast their scripts, and the second-place winners were introduced over the radio. All teachers and names of those received honorable mention were announced.

Junior high school winners on the subject, "TB Concerns You and Me," were: first place, Jo Ann Koski, Houghton; second, Sally Butts, Hemmeter School, Saginaw.

Senior high school winners on the subject "Our Protection Against TB," were: first place, Colombe Yeomans, Holland; second, Patrick Dakin, Resurrection School, Lansing.

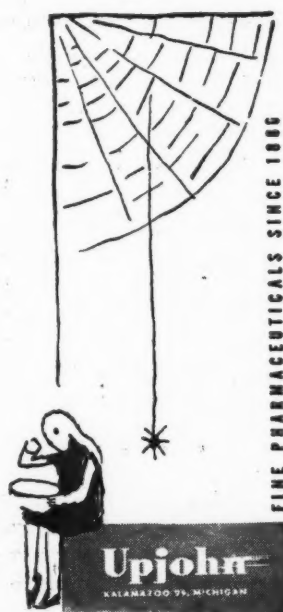
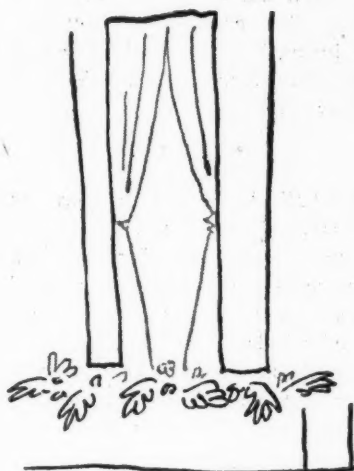
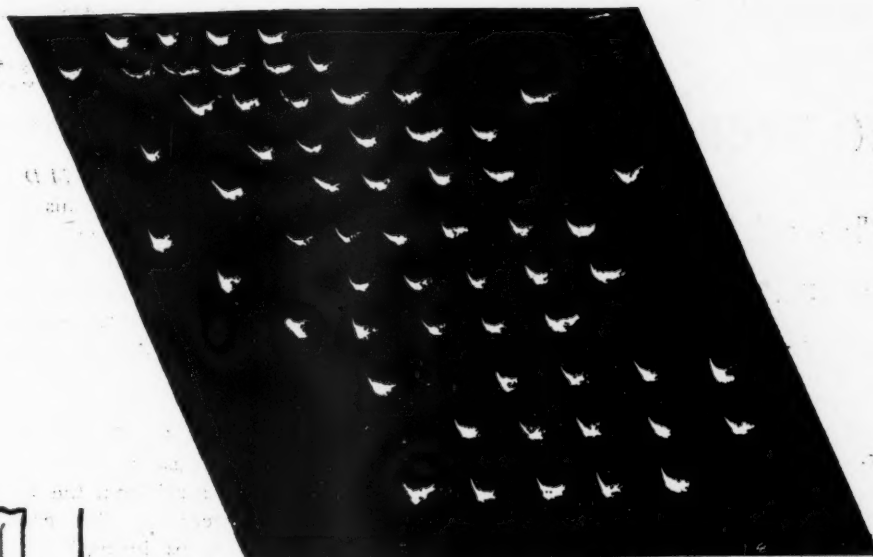
Winners on the subject, "Diagnosis: Tuberculosis," were: first place, Louise Fifelski, Wayland; second, Ron Sinclair, Jackson.

On the subject, "Light of Progress," the winners were: first place, Ann Kontas, Sexton High, Lansing; second, Marylyn Greene, Hancock.

Representatives from the following schools received honorable mention: Unionville, Cheboygan, Port Huron, Algonac, Bay City, Central High, Galesburg, Bear Lake, Hancock, Marquette, John D. Pierce High, Kaleva Rural Agricultural School, Holland, Eben Junction.

This project over the past few years has focused the attention of Michigan youth on a very important public health problem. This has been possible only through the intensive efforts of teachers, students, tuberculosis association workers and members of the Woman's Auxiliary to the county medical societies, to all of whom the entire credit is due.

MRS. MILTON SHAW, Chairman.



FINE PHARMACEUTICALS SINCE 1886

**Upjohn**  
KALAMAZOO 99, MICHIGAN

## "eating of curds and whey"

Miss Muffet's traditional meal should be supplemented with vitamin D, for it has been clearly demonstrated that children require vitamin D not only during their first two years but for as long as growth persists.<sup>1</sup> Upjohn makes available convenient, palatable, high potency vitamin D preparations derived from natural sources in forms to meet the varied requirements from earliest infancy through adolescence.

1. Am. J. Dis. Child. 66:1 (July) 1943.

**UPJOHN VITAMINS**

## the weakest link...

The value of the finest eye examination can be destroyed should inferior lenses be used in filling your optical prescription.

Safeguard your professional skill — employ Cummins for your optical needs.

Cummins uses only the best approved lenses from the leading optical manufacturers—Bausch & Lomb—Continental—Shuron—Soft-Lite—Univis.

*Be Sure With*

## CUMMINS OPTICAL COMPANY

CADILLAC 7344

76 W. Adams

4th Floor Kales Building

(Facing Grand Circus Park)

DETROIT 26, MICHIGAN

OFFICE HOURS:

DAILY 9 TO 5—MONDAYS TO 7 P. M.

## In Memoriam

*James C. Abrams, M.D.*, Calumet, was born in Al-louez, and received his elementary education in the Calumet public schools. He received his B.S. degree at Valpariso University in 1897 and his doctor of medicine degree at Northwestern University Medical School in 1901. He practiced continuously until his death in Calumet. Dr. Abrams died on December 16, 1946.

\* \* \*

*Sylvester L. Ballard, M.D.*, Grayling, formerly of Bay City, was born April 4, 1881 in Pioneer, Ohio. He was graduated from the Michigan College of Medicine and Surgery in 1905; served as a captain in the army medical corps during World War I; served as city commissioner in Bay City from 1925 to 1930. Doctor Ballard died in Bay City on January 8, 1947.

\* \* \*

*Frank F. Marshall, M.D.*, L'Anse, was born in Lawrence, Massachusetts, March 23, 1880. He received his doctor of medicine degree from Harvard Medical School in 1911. He came to the Upper Peninsula of Michigan shortly after his internship. He served with the United States Army Medical Corps during World War I, during two years of which service he was commanding officer of a hospital for contagious diseases in France. Dr. Marshall died in Marquette on December 16, 1946.

\* \* \*

*William W. Ryerson, M. D.*, Port Huron, was born in Waterford, Ontario, September 3, 1888. He was graduated from Detroit College of Medicine in 1911 and opened his practice of medicine in Port Huron the following year, after completing his internship. During World War I he served in the United States Army Medical Corps at Embarkation Hospital No. 2 near Jersey City, N. J., and at Camp Mills, Garden City, Long Island City, N. Y. Dr. Ryerson died on December 6, 1946.

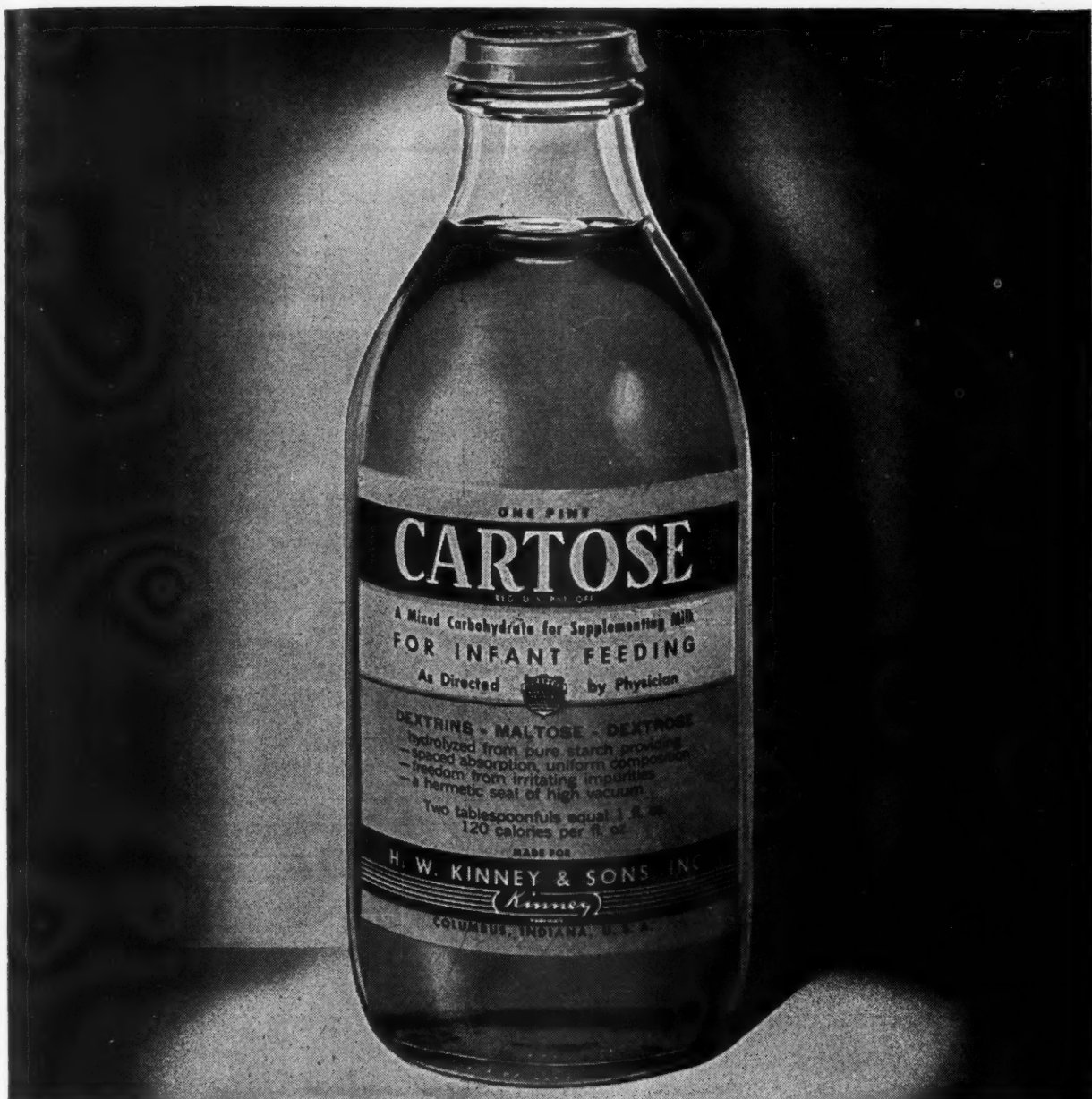
\* \* \*

*Frank T. McCormick, M.D.*, Detroit, was born at Barrie, Ontario, January 20, 1880. He was graduated from the University of Michigan Medical School in 1905 and practiced in Detroit, after completing his internship, until his death. He was a Fellow of the American Association of Industrial Physicians and Surgeons. Dr. McCormick died in Detroit on July 26, 1946.

\* \* \*

*David N. Robb, M.D.*, Ypsilanti, was born in Belleville, May 26, 1898. He was graduated from the Detroit College of Medicine in 1929, and after completing his internship in 1930, he located in Ypsilanti where he practiced until his death. He was former coroner for Wash-tenaw County. Dr. Robb died on November 13, 1946.





## EASE AND ECONOMY OF USE

Specification of CARTOSE\* as the mixed carbohydrate for infant feeding formulas provides ease and economy of use. The liquid form of this milk modifier permits rapid, accurate measurement, thereby avoiding waste.

Double protection against contamination is afforded by: (1) the narrow neck of the bottle, preventing spoon insertion, and (2) the press-on cap, assuring effective resealing.

CARTOSE supplies nonferment-

able dextrans in association with maltose and dextrose . . . a combination providing spaced absorption that minimizes gastrointestinal distress due to fermentation.

Available in clear glass bottles containing 1 pt. • Two tablespoonfuls (1 fl. oz.) provide 120 calories.



# CARTOSE

Mixed Carbohydrates

\*The word CARTOSE is a registered trademark of H. W. Kinney & Sons, Inc.

H. W. KINNEY & SONS, INC.

(Kinney)

COLUMBUS, INDIANA

## What's What

*Harold F. Falls, M.D.*, Ann Arbor, is the author of an original article entitled "Retinoblastoma" which appeared in *JAMA* of January 18, 1947.

\* \* \*

The Twelfth Assembly and Convocation of the United States Chapter, International College of Surgeons, will be held at the Palmer House, Chicago, September 29, 30—October 1, 2, 1947.

\* \* \*

Federal Government grabbed 82 cents of every Michigan tax dollar last year, as compared with 48.2 per cent in 1940 and 28.7 per cent in 1930, according to Department of Revenue figures.

—*Survey Digest*, December, 1946.

\* \* \*

The Kalamazoo Academy of Medicine was host on January 9 to W. M. Stanley, M.D., of the Rockefeller Institute for Medical Research. The recent Nobel Prize winner spoke to the Academy of Medicine on "Studies on Purified Influenza Virus."

\* \* \*

The Michigan Pathological Society held its February 8 meeting at Henry Ford Hospital, Detroit. Granville Bennett, M.D., chairman of the Department of Pathology, University of Illinois, conducted a seminar on "Diseases of Tendons and Joint Structures."

*California Health Insurance Drive.*—Republicans are in control of both the Senate and Assembly of California for the first time in many years. Governor Earl Warren again plans to propose a compulsory health insurance bill—so another bitter fight on this measure can be predicted.

\* \* \*

*Uniform Fee Schedule for Governmental Agencies.*—Question: Under "visits" does Item 2204 which reads, "Visit out of city for examination or treatment (over 3 miles from office)," allow for mileage one way or both ways?

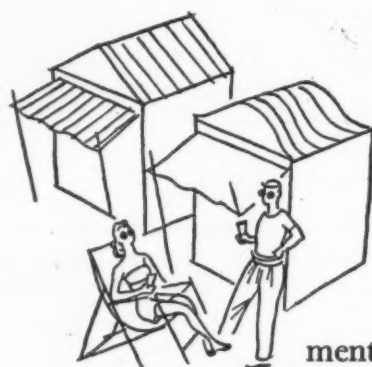
Answer: The mileage is for one way only.

Committee on Uniform Fee Schedule for Government Agencies.

\* \* \*

*L. G. Christian, M.D.*, Lansing, was one of the guest speakers on the program of the National Conference on Medical Service, February 9, at the Palmer House, Chicago. Dr. Christian participated in an open forum, with three other nationally known speakers, on the topic "Modern Influences in Medical Practice: Undergraduate Medical Education, Trends Toward Specialization, General Practitioners in Hospitals, Hospital Staff Organization."

(Continued on Page 236)



**GO SOUTH, young man  
GO SOUTH!**

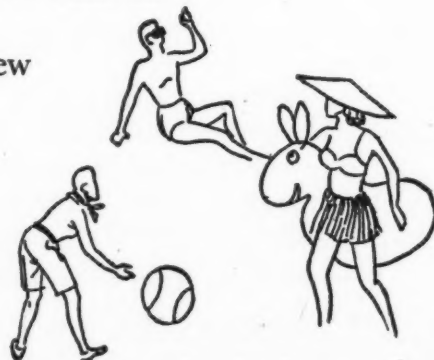
—and before you go, don't forget  
the proper clothes for utmost enjoy-

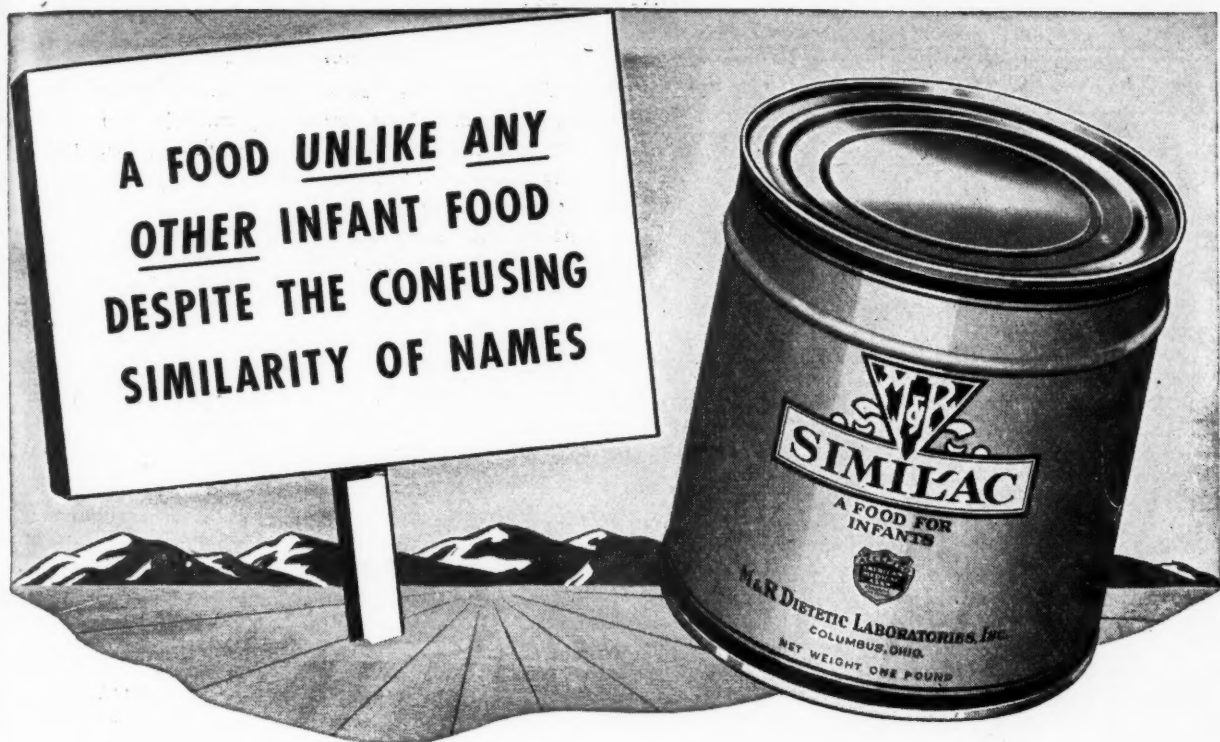
ment and correctness . . . such as

our present showing in our new

Southern Wear section.

**KILGORE and HURD**  
WASHINGTON BLVD. BOOK TOWER





THE FAT of Similac is not all butter fat, but a homogenized combination of fats that is balanced chemically and metabolically to the infant's requirements.

THE PROTEIN of Similac is rendered soluble to a point approximating the soluble protein in human milk.

THE CARBOHYDRATE in Similac is lactose.

THE MINERALS in Similac are adjusted to closely approximate the minerals of breast milk.

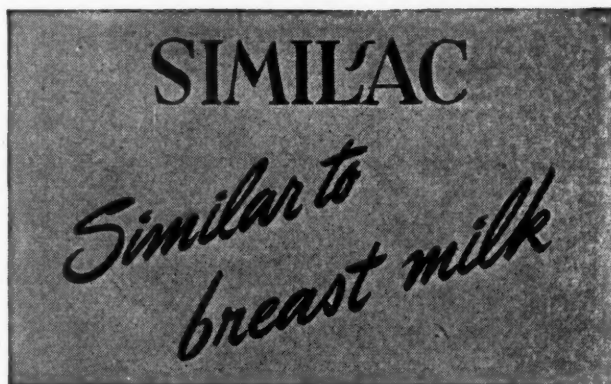
THE CURD TENSION of Similac is the same as that of breast milk — consistently zero.

*No other substitute resembles breast milk in all of these essential respects.*

M & R DIETETIC LABORATORIES, INC. • COLUMBUS 16, OHIO



A powdered, modified milk product, especially prepared for infant feeding, made from tuberculin tested cow's milk (casein modified) from which part of the butter fat has been removed and to which has been added lactose, cocoanut oil, cocoa butter, corn oil, and olive oil. Each quart of normal dilution Similac contains approximately 400 U.S.P. units of Vitamin D and 2500 U.S.P. units of Vitamin A as a result of the addition of fish liver oil concentrate.





★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★



## RESORT ENSEMBLE

● For the resort season. Smartly tailored coat and pleated slacks in a new rayon-blended fabric—soft to the touch, light weight, cool and wrinkle resistant.

**WHALING'S**  
MEN'S WEAR • 617 WOODWARD  
DETROIT 26 • MICHIGAN

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

(Continued from Page 232)

**Error in slide rule.**—Ciba Pharmaceutical Products, Inc., Summit, New Jersey, are much concerned regarding the error in the slide rule they distributed to all physicians in Michigan, recently. A correction of the slide-rule error has been forwarded to physicians generally, with the request that the correction be made, or that they write Ciba for a copy of the corrected slide rule.

\* \* \*

**"Eighty voluntary health insurance plans** in thirty-three states cover more than four million," is the subject of an article in JAMA of January 18, 1947.

"This pioneering task has just begun," states Thomas A. Hendricks, secretary of the Council on Medical Service, AMA. In this story Mr. Hendricks outlines how the Council is set up to do the job of encouraging the development of new plans, keeping the profession informed as to developments, and helping to increase the enrollment of plans already established.

\* \* \*

**Henry N. Harkins, M.D.**, who for a number of years was associate surgeon at the Henry Ford Hospital, and who left the Henry Ford Hospital to become associate professor of surgery with Dr. Alfred Blalock at Johns Hopkins Hospital and University in Baltimore, Maryland, has now accepted the position as professor of surgery and executive officer of the Department of Surgery at the University of Washington in Seattle. Dr. Raymond Allen is now president of the University of Washington. Dr. Harkins was a member of the Michigan State Medical Society.

\* \* \*

**The Annual President's Dinner** of the Ingham County Medical Society was held January 16. Retiring President Franklin L. Troost, M.D., incoming President Robert S. Breakey, M.D., and President-elect Oliver B. McGillicuddy, M.D., were introduced by Toastmaster LeMoyné M. Snyder, M.D.

H. J. Stafseth, D.V.M., Ph.D., of Michigan State College, spoke on "A Little of This and That from China." One hundred and ten members of the Ingham County Medical Society, together with their ladies, were present.

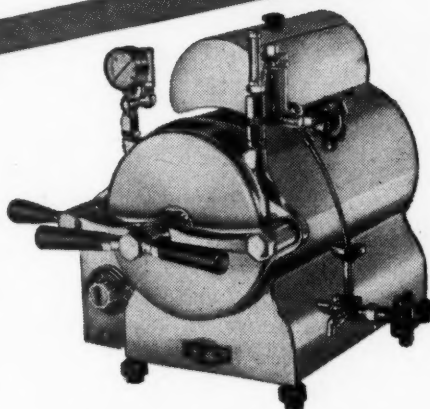
\* \* \*

**The First-Sixteenth Councilor Districts' meeting** is scheduled for Detroit on March 31, with C. E. Umphrey, M.D., Detroit, councilor of the First District, presiding. The meeting, a joint session at the Wayne County Medical Society, includes the following program: "Medical Matters in Our State" by William A. Hyland, M.D., Grand Rapids, president, Michigan State Medical Society; "The Federal Hospital Program" by L. Fernald Foster, M.D., Bay City, secretary, Michigan State Medical Society; "Some Legislative Problems Facing Medicine" by E. F. Sladek, M.D., Traverse City, chairman of MSMS Council; and "Modern Medical Public Relations" by E. R. Witwer, M.D., Detroit, councilor of the Sixteenth District.

(Continued on Page 240)

**FREE**  
of the Danger Zone in '47?

You can never tell when  
the blood stream of a patient  
carries spore-bearing bacteria.  
Guard against the danger  
of cross-infection by autoclaving  
all instruments and  
other materials that come  
in contact with any  
blood stream.



### **PELTON HP AUTOCLAVE**

brings hospital safety to your  
office. Compact, fully auto-  
matic, beautifully finished,  
it assures patients of  
modern care.



Boiling does not destroy spore-bear-  
ing bacteria. Chemicals may be effective if  
maintained long enough. Autoclaving (moist heat at  
250° F.) is the practical answer. Write today for your copy of the  
informative booklet, "A-B-C of Autoclave Sterilizing."

**DANGER LURKS BELOW 250° MOIST HEAT**

# PELTON

PROFESSIONAL EQUIPMENT SINCE 1900  
THE PELTON & CRANE CO., DETROIT 2, MICH.

for information  
on the



**Cardiotron**

and on the

**JONES  
METABOLISM UNIT**

*fill, clip and mail*

**THIS COUPON**



**WM. R. NIEDELSON      TE. 1-4055**  
**1214 Maccabees Bldg.**  
**Detroit 2, Mich.**

Please send me:

Booklet on "Accurate Basal Metabolism Testing  
and Clinical Applications.".....☐

Booklet on the Cardiotron—Instantaneous Direct  
Recording Cardiograph.....☐

Full Details on Your Demonstration Offer With-  
out Any Obligation:

On the Jones Metabolism Unit.....☐

On the Cardiotron.....☐

Name .....

Address .....

City & State .....

(Continued from Page 236)

**Rehabilitation.**—Governors of all states have been called upon for co-operation in stepping up the national rehabilitation program for the disabled. In letters sent to the governors during November, Federal Security Administrator Watson B. Milner advised that the program for the next fiscal year calls for a 300 per cent increase over last year's mark. To accomplish this increase, state appropriations of \$12,000,000 for the 1947-48 fiscal year would be needed, as against \$6,750,000 of state funds available for rehabilitation purposes during the current fiscal year.

The federal government, through the Office of Vocational Rehabilitation, furnishes approximately 70 per cent of the money spent by the states in vocational rehabilitational work. Most states will have to increase their appropriations to participate fully.

\* \* \*



**Seal of Acceptance for Medical Service Plans.**—Here is the Seal of Acceptance of the Council on Medical Service. To date, fifty-two plans have been approved by the Council and may use the Seal of Acceptance in their literature. Approval of four plans is still pending.

Use of the Seal is granted to those prepayment medical care plans which meet the Standards of Acceptance as set forth by the Council.

Of special interest in this regard is the fact that a number of large employers whose employees live in several states have indicated an interest in the approval program as a basis for considering prepayment programs for their plants.

\* \* \*

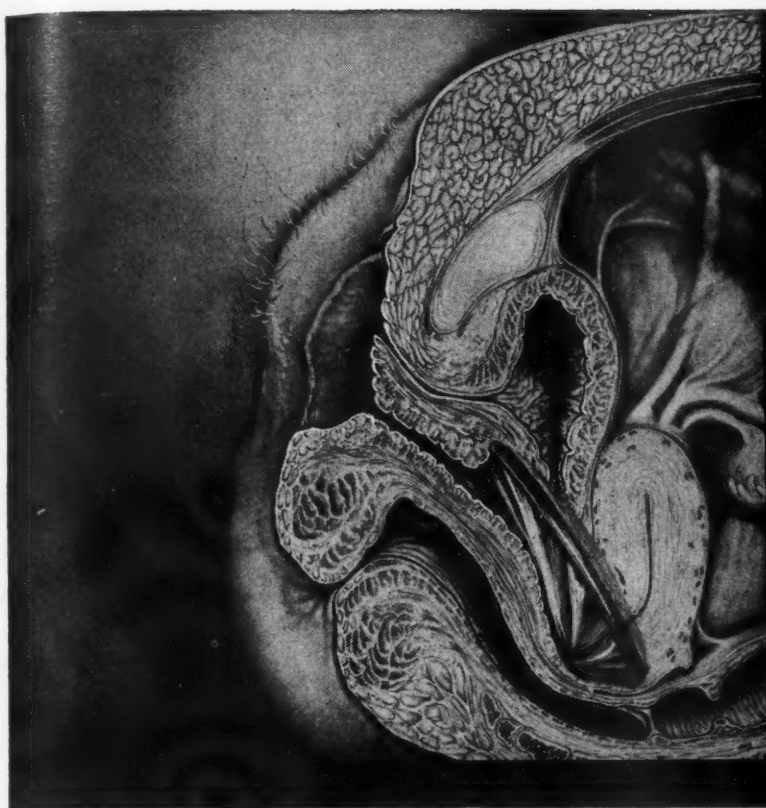
**Senators Taft, Smith and Ball** conferred with a committee of the AMA on December 27 in Washington on redrafting their bill of last year (S. 2143). It is our understanding that the new bill will have the following features: (1) a separate government agency for its administration, outside Federal Security or Public Health Service; (2) administered by a physician, to be appointed by the President, preferably from men in private practice; (3) Advisory Committee with more than advisory powers, also to be appointed by the President; (4) means test to be applied on state level; and (5) the administration to be on state level, according to plans formulated by the separate states. An appropriation of \$200,000,000 will be made available to be apportioned among the states according to a formula similar to that contained in the hospital construction law. The bill will be introduced in the Senate as soon as it can be drafted.

\* \* \*

**Country Editors Overwhelmingly Opposed To Government-Sponsored Medical Insurance.**—What does the voice of America say about the devices of state socialism? The *American Press* recently polled the outstanding editors in 1,000 rural communities to ascertain their views

(Continued on Page 244)





## Most DEPENDABLE Method

The combined use of an occlusive diaphragm and vaginal jelly remains, in the published opinions of competent clinicians, the most dependable method of conception control.

Dickinson<sup>1</sup> has long held that the use of jellies alone cannot be relied upon for complete protection. It is noteworthy that in the series of patients studied by Eastman and Scott<sup>2</sup>, an occlusive diaphragm was employed in conjunction with a spermicidal jelly for effective results. Warner<sup>3</sup>, in a carefully controlled study of 500 patients, emphasized the value of a diaphragm.

In view of the preponderant clinical evidence in its favor, we suggest that physicians will afford their patients a high degree of protection by prescribing the diaphragm and jelly technique.

You assure quality when you specify a product bearing the "RAMSES"\* trademark.

1. Dickinson, R. L.: *Techniques of Conception Control*. Baltimore, Williams and Wilkins Co., 1942.
2. Eastman, N. J., and Scott, A. B.: *Human Fertility* 9:33 (June) 1944.
3. Warner, M. P.: *J. A. M. A.* 115:279 (July 27) 1940.

gynecological division  
**JULIUS SCHMID, INC.**

*Quality First Since 1883*

423 West 55 Street

New York 19, N. Y.



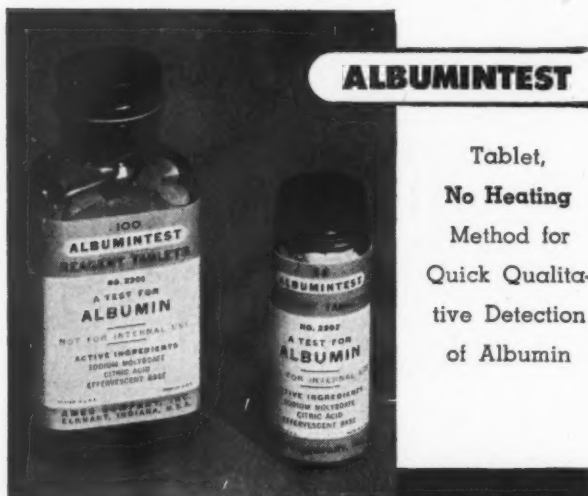
\*The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

FEBRUARY, 1947

*Say you saw it in the Journal of the Michigan State Medical Society*

243

## Companion PRODUCTS for URINE ANALYSIS



### ALBUMINTEST

Tablet,  
No Heating  
Method for  
Quick Qualita-  
tive Detection  
of Albumin



### CLINITEST

Tablet,  
No Heating  
Method for  
Detection of  
Urine-Sugar

Both products provide simple, reliable tests that can be conveniently and safely carried by physicians and public health workers. They are equally satisfactory for large laboratory operations. Clinitest is also available in special Tenite plastic pocket-size set for patient use.

#### ALBUMINTEST—

In bottles of 36 and 100.

#### CLINITEST—

Laboratory Outfit (No. 2108)

Includes tablets for 180 tests; additional tablets can be purchased as required.

Plastic Pocket-Size Set (No. 2106)

Includes all essentials for testing.

*Complete information upon request*

Distributed through regular drug and medical supply channels.

**AMES COMPANY, Inc.**  
ELKHART, INDIANA

(Continued from Page 240)

about the most publicized proposals offered by the leaders of the incoming Congress. The news and views of these editors are read by nearly seventy million persons. To the question: Do you think Congress should enact legislation for Government-sponsored medical insurance? The answers were: 12 per cent, yes; 80 per cent, no; 8 per cent, no answer. The "no" vote was exactly the same as in a similar poll by the *American Press* in September, 1945. What, no converts from all this W-M-D publicity? Page Boas, Falk, and Davis!

—MARJORIE SHEARON, Ph.D.  
Washington, D. C.

\* \* \*

*Postgraduate Anatomy.*—To meet the need for additional work the following courses in Regional Anatomy will be offered to the medical profession at Wayne University College of Medicine.

1. The Trunk, on Wednesday afternoons, from 1:00 to 5:00 (February 19 through May 28).
2. The Extremities and Back, on Thursday afternoons, from 2:00 to 5:00 (March 6 through May 29).
3. The Head and Neck, on Friday afternoons, from 1:00 to 5:00 (March 7 through May 30).

The courses, open to any doctor of medicine, will consist of lectures, demonstrations and dissection. The fee is \$50 for each course. Registration should be made in the office of the Director of Graduate Medical Education at the College of Medicine before February 12, 1947.

\* \* \*

*The Committee on State Veterans Affairs*, created by the 1946 MSMS House of Delegates, has been appointed by President William A. Hyland as follows: L. E. Sevey, M.D., *chairman*, Grand Rapids; G. C. Penberthy, M.D., Detroit; W. W. Babcock, M.D., Detroit; C. W. Brainard, M.D., Battle Creek; O. A. Brines, M. D., Detroit; William Bromme, M.D., Detroit; W. C. C. Cole, M.D., Detroit; W. C. Ellet, M.D., Benton Harbor; H. B. Fenech, M.D., Detroit; James Fyvie, M.D., Manistique; J. V. Fopeano, M.D., Kalamazoo; R. F. Hague, M.D., Flint; S. W. Hartwell, M.D., Muskegon; J. E. Ludwick, M.D., Jackson; K. S. McIntyre, M.D., Hastings; H. C. Mitchell, M. D., Grand Rapids; W. E. Nesbitt, M.D., Alpena; C. I. Owen, M.D., Detroit; F. H. Power, M.D., Traverse City; C. W. Reutter, M.D., Bay City; Paul Schrier, M.D., Kalamazoo; J. M. Sheldon, M.D., Ann Arbor; R. W. Teed, M.D., Ann Arbor; J. M. Wellman, M.D., Lansing, and Stuart Yntema, M.D., of Saginaw.

\* \* \*

A new tablet for purifying water in the soldier's canteen, which is considered superior to the chlorine-type tablets used during the war, has been announced by the War Department.

With iodine employed instead of chlorine, the new tablets make the drinking water less objectionable in taste and odor. Tests have shown that the iodine-containing tablet has greater sterilizing flexibility, in that it can be used under a wide range of conditions. It is also more suitable and dissolves more quickly than its predecessor. This tablet was developed by scientists of the Army Medi-

(Continued on Page 246)



**SPENCER**

**Hb - Meter**

*Brings Laboratory Accuracy to the Bedside*

This new hemoglobinometer makes it possible for anyone to measure hemoglobin concentration as accurately as with the better laboratory methods—less than three minutes after blood has been extracted.

The Hb-Meter is small enough to fit the pocket or bag, eliminates dilution liquids, volumetric measurements and tables, and operates anywhere from self-contained dry cells (or electric outlet). It is ideal for instant, on the spot use at the hospital, office or patient's bedside.

The process is simple. Blood is dropped directly onto a glass chamber and hemolyzed with a chemically impregnated applicator. Then the chamber is inserted, the illuminating switch pressed, and the lever moved until the fields match. Hb concentration is then read directly from one of the four scales either in grams per 100 ml or in percentages based on 15.6, 14.5 or 13.8 grams standard.

Price Hb-Meter outfit, complete.....\$34.50

**MEDICAL ARTS SURGICAL SUPPLY COMPANY**



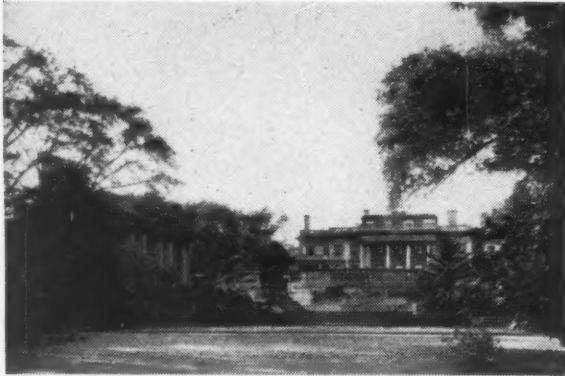
PHYSICIANS AND HOSPITAL SUPPLIES

TELEPHONE 9-3463

20-22-24 SHELDON AVE. S. E., GRAND RAPIDS 2, MICHIGAN  
DISTRIBUTORS FOR ALL NATIONALLY KNOWN PHARMACEUTICALS



# Detroit Medical Hospital



7850 East Jefferson Avenue

A private hospital devoted to the diagnosis and treatment of mental and nervous illness, alcoholics and drug addicts. All accepted psychiatric and mental therapies.



Beautiful grounds facing the Detroit River

Registered by the  
American Medical Association

Licensed by the  
Michigan State Hospital Commission

**DETROIT MEDICAL HOSPITAL**  
**FITZROY 7100**  
**7850 E. JEFFERSON AVE.**  
**DETROIT 14 MICHIGAN**

(Continued from Page 244)

cal Department, Quartermaster Corps and Corps of Engineers.

When the chlorine-containing tablets were dissolved in water, soldiers complained that they made the water unpleasant to the taste. It was found that, even with strict supervision, it was sometimes difficult to prohibit the soldiers from drinking water from streams or wells of questioned purity.

\* \* \*

*Michigan representatives on AMA broadcast.*—Michigan will have a part, April 5, in the current radio series of the AMA, "Doctors Now and Then." It will be broadcast on the coast-to-coast network on the NBC at 4:00 PM, EST. Each program of the AMA series dramatizes the life and times of a doctor of medicine in one region of the United States and contrasts him with present times. Michigan will be represented April 5, at which time incidents in the life of Dr. Douglas Houghton, sometimes referred to as "The Little Doctor" and "The Great Geologist," will be dramatized. The City of Houghton, Michigan, and Houghton Lake in this state are both named after Dr. Douglas Houghton, who practiced medicine in Detroit and was one of its first mayors. A contrast will be drawn between the health conditions of his day and those of today. Following the dramatization, a three-minute comment on present conditions will be made by J. Milton Robb, M.D., Detroit, past president of the Michigan State Medical Society, who will be "picked up" at the Detroit station, WJR.

\* \* \*

*EMIC Babies.*—Somewhere in the United States on or about Armistice Day, the millionth baby under the EMIC program arrived. Another 100,000 were on the way. In addition, 180,000 of the babies already born have received or are receiving additional medical, hospital or nursing care during the first year of their life.

The Children's Bureau, which sponsors the program administered by the state health departments, reports the cost to the government at almost \$100,000,000 at the rate of about \$100 for a maternity case and \$65 for an infant's case.

At the peak of the program, one out of every seven infants born were EMIC babies. Between 40,000 and 45,000 maternity and infant cases were being authorized each month. Now the total authorizations are about 15,000 a month. Of the EMIC babies nine out of ten were hospital born. The proportion of hospital births among all babies born in the United States was seven and one-half out of ten in 1944.

\* \* \*

*The Sixth Councilor District meeting* was held at the Elks Club, Flint, on January 14. W. Z. Rundles, M.D., Flint, president of the Genesee County Medical Society, presented R. C. Pochert, M.D., of Owosso, councilor of the Sixth District, who acted as toastmaster. R. S. Morrish, M.D., Flint, immediate past president of the Michigan State Medical Society, welcomed the guests to Flint. Carleton Dean, M.D., Lansing, director, Michigan

(Continued on Page 248)

## AN ADDED

Urine Analysis  
Blood Chemistry  
Hematology  
Special Tests  
Basal Metabolism  
Serology  
Parasitology  
Mycology  
Phenol Coefficients  
Bacteriology  
Poisons  
Court Testimony

*Send for  
Fee List*

# Service

to the Medical Profession

## SIX HOUR PREGNANCY TEST

THE SAME dependable service you have always found at Central Laboratories is now available on a *six hour pregnancy test*—the GONESTRONE Test.

The latest and most reliable of the tests for determining pregnancy, the GONESTRONE is a modification of the Aschheim-Zondek and Friedman Tests, and was originated by Drs. Salmon, Geist, Frank and Salmon. In approximately 1,000 comparative tests made during the past year in our research department, we have found the GONESTRONE to be almost 100 per cent accurate.

In this, as in other clinical tests and chemical analyses made in our laboratories, your work will be handled with thoroughness and exactitude. . . . Your patients will find pleasant, well-equipped examining rooms. . . . You will approve our fees.

Directors: Joseph A. Wolf  
Dorothy E. Wolf . . .

*Central Laboratories*  
Clinical and  
Chemical Research  
312 David Whitney Building  
Detroit 26, Michigan . . . .  
Telephones: Cherry 1030. (Res.) Evergreen 1220

## New INSURANCE HEADQUARTERS

Equipped to give you dependable insurance counsel and sound, efficient, economical insurance service.

Jack and Richard Whiting, old friends of the medical profession, have broadened their services to include complete insurance coverage for the Doctor.

### Ask About

ACCIDENT-SICKNESS  
LIFETIME PROTECTION  
for  
MICHIGAN PHYSICIANS



*Whiting and Whiting*

GENERAL INSURANCE  
CHERRY 9398

520 FORD BLDG.

DETROIT 26

*A few of the newer pharmaceuticals  
which we have in stock for  
immediate delivery . . .*

### FURACIN

A new chemotherapeutic compound for treatment of wounds and surface infections.

### ANTI RH SERUM

A diagnostic agent for the rapid and accurate determination of RH factor in human blood by the microscopic slide agglutination method.

### BLOOD GROUPING SERA

(Powdered)

Anti A

Anti B

Literature available on request

**The Rupp & Bowman Company**

315-319 Superior St.

Toledo, Ohio

as close as your  
telephone . . .

**Wocher's**  
**EVERY-DAY NEEDS**

For Physicians & Surgeons

*Surgical  
Instruments*

★

*Medical  
Supplies*

*Make it a habit to order  
from the*

DETROIT BRANCH  
**Roland Randolph**  
MANAGER

**CAdillac 9404**  
**MUrray 3380**

OR WRITE TO:

**371 Manistique**  
**Detroit 15, Mich.**

Wocher's Detroit Branch was established for the convenience of Michigan physicians.

Place all your mail or telephone orders for personal and prompt service through Roland Randolph in Detroit.

(Continued from Page 246)

Crippled Children Commission, spoke on "Rheumatic Fever Control in Michigan." President William A. Hyland, M.D., Grand Rapids, spoke on "What's Going On, Medically, In Our State." L. Fernald Foster, M.D., Bay City, MSMS secretary, presented facts on the federal hospital construction program. William J. Burns, Lansing, MSMS executive secretary, presented "Some Legislative Problems Facing Medicine," and H. W. Brenne- man, Lansing, MSMS public relations counsel, spoke on "Modern Medical Public Relations." The meeting was attended by 103 doctors from all parts of the Sixth Councilor District.

\* \* \*

*Guide for Physical Examinations of Veterans.*—In most instances where the question of degree of disability is raised by a veteran, or the existence of some disease or disability not admitted to exist by the Veterans Administration is at issue, it is necessary for the veteran to submit medical evidence in support of his claim. Quite frequently this medical evidence submitted by the veteran is wholly inadequate and is of little or no importance.

This condition is not the result of a lack of knowledge of medical science by the physician who substantiates the evidence for the veteran, but is a factor brought to the forefront by the use of a peculiar medical nomenclature used by the Veterans Administration in physical examinations for rating purposes.

A pamphlet entitled "Guide for Physical Examinations" has been compiled by George W. Cameron, Chief of Claims Service, Department of Veterans' Affairs, State of Alabama, which material may be of interest and help to Michigan doctors of medicine.

Copies are available by writing the Michigan Office of Veterans' Affairs, 411-15 W. Michigan Ave., Lansing 15, Michigan.

\* \* \*

*Speakers on the "Doctor of Medicine" Program* over Radio Station CKLW on Fridays at 12:45 PM (Sponsored by the Hack Shoe Company) have included: September 13, Joseph G. Molner, M.D., Detroit, "Children's Health;" September 20, Ray S. Morrish, M.D., Flint, "The Medical Convention In Respect to Patient;" September 27, Ralph A. Johnson, M.D., Detroit, "Hypertension;" October 4, A. E. Catherwood, M.D., Detroit, "Maternal Care;" October 11, L. Fernald Foster, M.D., Bay City, "The National Health Problem and You;" and from Detroit only, October 18, Andrew S. Brunk, M.D., "Cancer;" October 25, A. E. Schiller, M.D., "The Skin You Love To Touch;" November 1, Wyman C. C. Cole, M.D., "Child Care;" November 8, P. L. Ledwidge, M.D., "Rheumatic Fever, Public Enemy No. 1;" November 15, Donald C. Somers, M.D., "Present Concepts of Orthopedic Surgery;" November 22, L. W. Wiren, M.D., "What Is A Psychiatrist;" November 29, C. E. Umphrey, M.D., "Care Of The Feet and Legs;" December 6, Frank H. Purcell, M.D., "Orthopedic Surgery;" December 13, William M. Tuttle, M.D., "Pulmonary Tuber-

(Continued on Page 254)



## Cook County Graduate School of Medicine

### ANNOUNCES CONTINUOUS COURSES

**SURGERY**—Two-week intensive course in Surgical Technique starting January 20, February 17, March 17.

Four-week course in General Surgery starting February 3 and March 3.

Two-week Surgical Anatomy & Clinical Surgery starting February 17 and March 17.

One-week Surgery of Colon & Rectum starting March 10 and April 7.

Two-week Surgical Pathology every two weeks.

**GYNECOLOGY**—Two-week intensive course starting March 17, and April 14.

One-week course in Vaginal Approach to Pelvic Surgery starting March 10 and April 7.

**OBSTETRICS**—Two-week intensive course starting March 3 and April 28.

**MEDICINE**—Two-week intensive course starting April 7 and June 2.

One-month course Electrocardiography & Heart Disease starting February 15 and June 16.

*General, Intensive and Special Courses in all Branches of Medicine, Surgery and the Specialties*

TEACHING FACULTY — ATTENDING  
STAFF OF COOK COUNTY HOSPITAL

Address:

Registrar, 427 S. Honore St., Chicago 12, Ill.



**ROMAN CLEANSER**  
whitens clothes  
*Safely*  
GERMICIDE-DISINFECTANT

**SODIUM HYPOCHLORITE**  
PRODUCT OF MANY USES. READ LABEL  
*Dependable — Convenient — Economical*  
QUARTS & HALF GALLONS SOLD AT GROCERS

## EMPLOYMENT SERVICE

Specializing in Superior **Administrative, Technical and Professional Personnel** in the **Medical, Dental, Pharmaceutical and Related Professions.**

*This service is confidential. There is no charge for registration.*

## MEDICAL PLACEMENT

76 W. ADAMS

DETROIT 26

## In Lansing HOTEL OLDS

Fireproof

400 ROOMS

## RACKHAM SHOES Foundation for Good Health

SPECIFY RACKHAM'S  
for  
BETTER FITTING ORTHOPEDIC SHOES

*Stuart J. Rackham Company*

Stuart J. Rackham  
President

**CORRECT SHOES FOR MEN AND WOMEN**  
2040 Park Ave.—Opposite Women's City Club Detroit 26, Michigan

Clyde K. Taylor  
Manager

## THE DOCTOR'S LIBRARY

*Acknowledgment of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.*

**OPERATIVE GYNECOLOGY.** By Richard W. Te Linde, M.D., Professor of Gynecology, Johns Hopkins University, and Chief Gynecologist, Johns Hopkins Hospital. With 309 illustrations in black and white, and fifteen subjects in full color on nine plates. Philadelphia: J. B. Lippincott Company, 1946.

Gynecology has become a specialty of itself, and as such involves many angles of diagnosis and treatment. It involves urological conditions, psychiatric problems, surgical technique, anesthesia, and many conditions which must be investigated. The author has incorporated all that in his new book. This is a fully executed text describing in detail all types and forms of disease with its diagnosis and numerous surgical illustrations and descriptive instructions. All the newest developments are given, and after each chapter a short but sufficient bibliography. Surgery of the abdominal wall, intestinal surgery, and congenital defects are all given careful attention. This volume is very complete, and is worthy of place on the book shelves of surgeons, gynecologists and internists.

**THE DIFFERENTIAL DIAGNOSIS OF JAUNDICE.** By Leon Schiff, Ph.D., M.D., Associate Professor of Medicine, Department of Internal Medicine, University of Cincinnati Medical School. Director Gastric Laboratory, Cincinnati General Hospital. Chicago: The Year Book Publishers, Inc., 1946. Price \$5.50.

The author, after contacts for over twenty years with students and practitioners, and in an attempt to fulfill

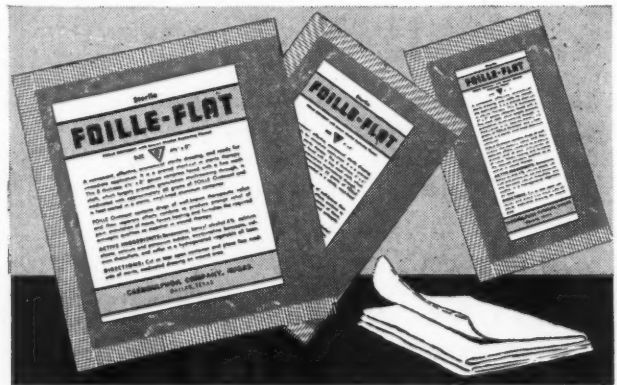
manifest needs, has written a book to place at their disposal an authoritative discussion of the clinical and pathological features of jaundice. This condition occurs in so many different diseases, and has so many implications that it must be treated almost as a disease entity. The classifications of jaundice are emphasized, whether hepatogenous, neoplastic, et cetera. Systemic infections, acute yellow atrophy, Weil's disease, cirrhosis, carcinoma are all described at length. Much attention is given to physical examination and various laboratory methods, x-ray, urobilin determination, and liver biopsy. The latter is very carefully described and evaluated. The book is well worth careful study by the diagnostician and the surgeon.

**MUSCLE TESTING—Techniques of Manual Examination.** By Lucille Daniels, M.A., Director and Associate Professor of Physical Therapy, Stanford University; Marian Williams, M.A., Assistant Professor of Physical Therapy, Stanford University; and Catherine Worthingham, M.A., Director of Professional Education, The National Foundation for Infantile Paralysis, Inc. Designed and illustrated by Harold Black with 349 diagrammatic line drawings. 189 pages. Philadelphia and London: W. B. Saunders Company, 1946. Price \$2.50.

Muscle action and testing is important in treatment of disease involving paralysis or impairment of action such as poliomyelitis. This book gives in sketch form the muscles involved in the making of motions and actions. Skeletal segments are illustrated with the muscles shaded in, and on the opposing page the picture of the performance of four tests developing that motion or action. The first is "normal and good"; the second picture shows "fair," and the third "poor," and the last shows "trace and zero." Sometimes there are two or three illustrations of each reaction. This book would be invaluable in the

## Announcing the New FOILLE-FLAT

*Sterile, Instant  
Surgical Dressing*



To better serve the Industrial Surgeon, the Physician and Hospital in the treatment of traumatic wounds, burns and ulcers, the new Foille-Flat offers these practical, clinical advantages:

- Sterile—not just sterilized.
- Specially devised to avoid sticking.
- Heat-sealed in aluminum vinyl-lined envelopes.
- Medicated with the New Foille Ointment.
- Ready for immediate application.
- For office, first aid and hospital use.
- Manufactured in three sizes: 3"x3"; 4"x4"; 4½"x8".

**Convenient Time-Saving Economical**

**The G. A. INGRAM COMPANY**

4444 Woodward Ave., Detroit, Mich.

outlining and conducting of recuperative measures in treatment of infantile paralysis and certain other forms of paralysis.

**MEDICAL RESEARCH.** A symposium edited by Austin Smith, M.D., Secretary, Council on Pharmacy and Chemistry; Director, Therapy and Research, American Medical Association. 17 illustrations. Philadelphia: J. B. Lippincott Company. 1946. Price \$5.00.

This is a collection of various papers regarding research with especial relation to medicine. The articles are devoted to the mental attitude, motives, training, and objects to be obtained. Some guiding principles are quoted such as "If you do something of significance in your work, write it up and send it to a good journal." Industrial expenditures are a great factor in medical research. Research laboratories are discussed, giving the function, buildings, equipment, et cetera, but much valuable research has been done with the most inadequate furniture and facilities, but with the most important factor an observing mind. Publication of results is important. Methods of study should include photography, especially modern color records. Ten color illustrations, very striking, are given to emphasize the text. A valuable book for the individual having in mind any form of research, because of the valuable hints and cautions.

**MEDICAL USES OF SOAP.** A symposium edited by Morris Fishbein, M.D., Editor of *The Journal of the American Medical Association*. 41 illustrations. Philadelphia: J. B. Lippincott Company, 1946. Price \$3.00.

This book was reviewed before, but in its second printing much new material is used, and an entirely new chapter is added on "The Surgical Uses of Soap." Chemistry and manufacture of soap is outlined. New detergents are also described. Edwin P. Jordan, M.D., Associate Editor of *The Journal of the American Medical Association*, contributed the new chapter. This book is interesting and valuable in giving us so much information about a commonly used article about which we do not know too much.

**THE CHALLENGE OF POLIO.** The Crusade Against Infantile Paralysis. By Roland H. Berg. Introduction by Basil O'Connor, President, The National Foundation for Infantile Paralysis, Inc. New York: The Dial Press, 1946. Price \$2.50.

This book is a history of infantile paralysis and man's fight to overcome it. Ancient Egyptian murals showed crippling obviously from infantile paralysis, and a skeleton of 3700 B.C. showed bone formation indicative of this disease. It has occurred in other parts of time and place, but the first actual description of the disease was in 1784. The epidemic form only appeared in very recent times, 1894, in Otter Creek, Vt. It was in 1916 that the import of the disease became apparent. This book tells the story, mentions the story of F.D.R. and his affliction. It tells of his exhausting experiences previous to his attack, and the establishing of treatment at

## MEDICAL and SURGICAL SUPPLIES OFFICE EQUIPMENT

A cordial invitation is extended to all Doctors, Surgeons and Nurses to visit our display rooms and inspect our complete line of medical, surgical and hospital supplies and equipment.

**DETROIT FIRST-AID CO.**  
179 W. Jefferson St. Detroit, Mich.

### DIETS • DIETS • DIETS

42 — PREPARED DIETS — 42

Write today for complete list

### Special Introductory Offer

INDEXED FOLIO FREE WITH INITIAL ORDER  
200 ASSORTED DIETS — \$6.50

Imprinted with physician's name and address. Mail check with order, giving printing instructions. Allow six days for delivery in state.

**AMERICAN DIET SERVICE**

424 Book Building, Detroit 26, Mich.

*Patronize Our Advertisers*

## ZEMMER pharmaceuticals

A complete line of laboratory controlled ethical pharmaceuticals.  
Chemists to the Medical Profession for 44 years.

THE ZEMMER COMPANY • Oakland Station • PITTSBURGH 13, PA.

MJ 2-47



# Meyer Institute of Body Culture

Massage and Swedish Movements—Medical Gymnastics

Separate Departments for  
Ladies and Gentlemen

Trinity 2-2243-4  
330 New Center Building, Detroit 2, Michigan

## A Specialized Laboratory Service

BASAL METABOLISMS BY APPOINTMENT ONLY

Electrocardiograms, 1 to 4:30 P. M. and by  
Appointment

Home Tests by Request

Wilson & Goldberger Leads by Request

### THE BASAL METABOLISM AND CARDIOGRAM LABORATORY

512 KALES BLDG.

DETROIT 26

CADILLAC 4228

Warm Springs. It tells of the search for a germ, and for a cure. The virus has been isolated, and treatment for the disease instituted. It has been found that of a group of persons exposed, those with excessive tiring or exposure are the ones to be attacked the most viciously. The story of tonsil connection is given with apparent conclusive "proof" that recent tonsillectomies predispose to the infection. Sewage contamination is stressed, but as a method of flies getting contaminated.

Pediatricists and internists should be familiar with the contents of this book.

## WHAT'S WHAT

(Continued from Page 248)

culosis;" December 20, Frank A. Weiser, M.D., "Health at Forty and Beyond;" December 27, Milton L. Sorock, M.D., "Nurses in War and Peace;" January 3, C. D. Selby, M.D., "It's In The Air;" January 10, L. W. Hull, M.D., "Physical Health Examination;" January 17, Charles W. Peabody, M.D., "Orthopedics For The Not-So-Young;" January 24, Martin H. Hoffmann, M.D., "True Facts on Epilepsy."

## DERMATITIS MEDICAMENTOSA

(Continued from Page 211)

recognized that urticaria was a fairly common complication of penicillin therapy. While the urticaria is often mild and transient, in many instances it has been of severe degree, the eruptive elements being extremely large and extensive, and the pruritus intolerable. In such cases, control has often been difficult to attain, as, in some instances, the use of adrenalin, ephedrine, benedryl or pyribenzamine has failed to relieve the symptoms. The delayed character of this urticarial reaction is important, as commonly it may not appear till some days have elapsed since discontinuance of the drug.

Other types of cutaneous reactions to the use of penicillin have also been observed, as angioneurotic edema, miliaria-like eruptions, erythema nodosum, and erythematovesicular eruptions which may simulate dermatophytosis. In connection with the latest named type of eruption, it is interesting to note that several observers have indicated that previous fungus infections of the skin predispose toward the development of reactions to penicillin, usually with the development of the manifestations at the sites of the lesions of earlier eruptions of mycotic origin.

Reactions to penicillin may appear shortly after the exposure to the drug, presumably due to an inherent sensitivity or to a previous fungus infection, or may not appear until later, due to a developing sensitization.

Inactive cases of tuberculosis which are revealed by x-rays need continuous observation and follow-up to be assured that they do not again become active.



## In Cheilitis from LIPSTICK

Intractable exfoliative lip dermatoses may often be traced to eosin lipstick dyes. Remove the offending irritants, and the symptoms often disappear. In lipstick hypersensitivity, prescribe AR-EX NON-PERMANENT LIPSTICK—so cosmetically desirable, yet free from all known irritants. Send for Free Formulary.



PRESCRIBE



AR-EX

NON-PERMANENT  
LIPSTICK



AR-EX COSMETICS, INC. 1036 W. VAN BUREN ST. CHICAGO 7, ILL.